

# 23<sup>rd</sup> Annual Canadian Nuclear Society Conference and 27<sup>th</sup> Annual CNS/CNA Student Conference

## Sunday June 2, a.m. & p.m.

### **27<sup>th</sup> Annual CNS/CNA Student Conference; Regency A (09:00–14:00)**

Chair: J. Koclas (École Polytechnique de Montréal)

### **Reception – King I (19:00–21:00)**

**Celebrating AECL's 50<sup>th</sup> Anniversary;**  
Address by R. Van Adel, President and CEO,  
Atomic Energy of Canada Limited

## Monday June 3, a.m.

### **Speakers' Breakfast & Delegates' Continental Breakfast; King I & Regency Foyer (07:30-08:30)**

### **SESSION 1: Plenary I: Current Status and Future Expectations; Regency A–C (08:30-12:00)**

Co-Chairs: R. Van Adel (Atomic Energy of Canada  
Limited) and J. Sommerville (CANDU Owners Group)  
**Welcome,** D.P. Jackson (CNS) and K. Talbot (Bruce  
Power, Conference Chair)

## Monday June 3, p.m.

**Luncheon (12:00-14:00); Guest Speaker:**  
Hans Tammemagi, Oakhill Environmental, on  
"Can the Public Learn to Love Nuclear?"

### **SESSION 2A: Thermalhydraulics; Regency A (14:00-17:00)**

Co-Chairs: P. Gulshani (Atomic Energy of Canada  
Limited) & H. Huynh (Hydro-Québec)

### **SESSION 2B: Operations, Maintenance and Performance; Regency B (14:00-17:00)**

Chair: M. Léger (Atomic Energy of Canada Limited)

### **SESSION 2C: Isotopes and Medical Applications; Regency C (14:00-17:00)**

Co-Chairs: J.M. Cuttler (Cuttler and Associates Inc.) &  
G. Malkoske (MDS Nordion)

### **SESSION 2D: Physics I; Regency D (14:00-17:00)**

Co-Chairs: J.V. Donnelly (Ontario Power Generation, Inc.)  
& A. Lone (Atomic Energy of Canada Limited)

### **CNS Annual General Meeting; Regency D (17:00)**

## Tuesday June 4, a.m.

### **Speakers' Breakfast & Delegates' Continental Breakfast; King I & Regency Foyer (07:30-08:30)**

### **SESSION 3A: Aging and Plant-Life Extension I; Regency A (08:30-12:00)**

Co-Chairs: V.K. Chaturvedi (Nuclear Power Corporation of  
India Limited) & M. Wash (Organization of CANDU Industries)

### **SESSION 3B: Safety I; Regency B (08:30-12:00)**

Co-Chairs: J. Luxat (Ontario Power Generation, Inc.)  
& B. Shalaby (Atomic Energy of Canada Limited)

### **SESSION 3C: Control and Instrumentation; Regency C (08:30-12:00)**

Co-Chairs: E. Davey (Crew Systems Solutions) & J. Popovic  
(Atomic Energy of Canada Limited)

### **SESSION 3D: Physics II; Regency D (08:30-12:00)**

Co-Chairs: G. Marleau (École Polytechnique de Montréal)  
& D. Serghiuta (Canadian Nuclear Safety Commission)

### **SESSION 3E: Waste Management; Regency E (08:30-12:00)**

Co-Chairs: K. Dormuth & M. Stephens (Atomic Energy of  
Canada Limited)

### **CNA Annual General Meeting; Oak Room (10:00-10:30)**

Open to all CNA members

### **CNA Board Meeting; Oak Room (10:30)**

Restricted to CNA Board members

## Tuesday June 4, p.m.

**Special Event – Young Generation Network's 2002  
Professional Development Seminar; Regency D  
(12:00-13:30); Led by: M. McIntyre (Atlantic Nuclear Services  
Ltd.); Guest Speakers: Dr. C. Keith Scott (Chairman & CEO,  
Atlantic Nuclear Services Limited) & Dr. D.F. Torgerson (Senior  
Vice-President, Technology, Atomic Energy of Canada Limited)**

### **SESSION 4A: Plenary IIa: The Present and the Future; Regency A–C (13:30-14:45)**

Chair: D. Jackson (McMaster University)

### **SESSION 4B: Plenary IIb: A Look at Canada's Nuclear History; Regency A–C (15:15-16:30)**

Chair: E. Horton

### **Awards Banquet; King Ballroom (18:00)**

## Wednesday June 5, a.m.

### **Speakers' Breakfast & Delegates' Continental Breakfast; King I & Regency Foyer (07:30-08:30)**

### **SESSION 5: Plenary III: Future Challenges and Opportunities; Regency A–C (08:30-12:00)**

Chair: K. Talbot (Bruce Power)

## Wednesday June 5, p.m.

### **CNS Luncheon; King Ballroom (12:00-14:00); Guest Speaker:**

Science Reporter Bob MacDonald on  
"Science in the Third Millennium"

### **SESSION 6A: Aging and Plant-Life Extension II; Regency A (14:00-17:00)**

Co-Chairs: G. Balog (Ontario Power  
Generation, Inc.) & P.D. Thompson  
(New Brunswick Power)

### **SESSION 6B: Safety II; Regency B (14:00-17:00)**

Co-Chairs: R. Chun (Bruce Power) &  
V.G. Snell (Atomic Energy of Canada Limited)

### **SESSION 6C: Management Issues; Public Acceptance; Regency C (14:00-17:00)**

Co-Chairs: S. Guellouz (Royal Military College of Canada)  
& J.J. Whitlock (Atomic Energy of Canada Limited)

### **SESSION 6D: Looking to the Future; Regency D (14:00-17:00)**

Co-Chairs: H. Bonin (Royal Military College of Canada)  
& J.W. Love (Atomic Energy of Canada Limited)

### **SESSION 6E: Radiation; Regency E (14:00-17:00)**

Co-Chairs: R. Khaloo (Atomic Energy of Canada Limited)  
& J. Tamm (Atomic Energy of Canada Limited)

**40** Years of Nuclear  
Power in Canada  
années d'énergie  
nucléaire au Canada

Toronto, Ontario, June 2–5, 2002

# SESSION 1: Plenary I – Plénière I

## Current Status And Future Expectations

*Co-Chairs / Présidents: R. Van Adel (Atomic of Canada Limited),  
J. Sommerville (CANDU Owners Group)*

**Nuclear Recovery and Commercial Readiness,**  
*P.R. Charlebois (Ontario Power Generation, Inc.)*

**The First Year and the Future,**  
*D. Hawthorne (Bruce Power)*

**Possible Refurbishment of Pt. Lepreau – Update 2,**  
*R.M. White, E.R. Eagles, S.H. Groom,  
C.N. Hickman and P.D. Thompson (New Brunswick Power)*

**Gentilly-2 Refurbishment Pre-Project,**  
*R. Pageau, M. Doyon & M.R. Rhéaume (Hydro-Québec)*

**Overseas CANDU Projects and Performance,**  
*G. Kugler (Atomic Energy of Canada Limited)*

**Nuclear Power: The Sustainable Energy Option for India,**  
*V.K. Chaturvedi (Nuclear Power Corporation of India Limited)*

**Heavy-Water Reactors: Status and Projected Development,**  
*R. Lyon (International Atomic Energy Agency)*



# SESSION 2A: Thermalhydraulics

*Co-Chairs / Présidents: P. Gulshani (Atomic Energy of Canada Limited),  
H. Huynh (Hydro-Québec)*

**Validation of CATHENA MOD-3.5c/Rev0 for Void-Collapse Water Hammer,**  
*T.G. Beuthe and J.W. Gu (Atomic Energy of Canada Limited)*

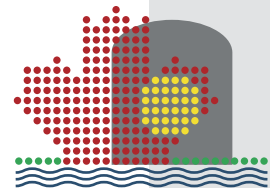
**TUF Heat-Transport-System Simulation of Darlington Unit 3  
Steam Bleed Valve Failed Open Event,**  
*D. Naundorf and W. Liauw (Ontario Power Generation, Inc.)*

**NUCIRC-MOD2.000: Validation of 37-Element Fuel-Bundle-String Critical Heat Flux,**  
*R. Ion and S. Doerffer (Atomic Energy of Canada Limited)*

**Two-Phase Flow Regime Transition in Large-Diameter Vertical Pipes,**  
*W. Zhu, C.Y. Ching and M. Shoukri (McMaster University)*

**Application of CATHENA Code for Trip-Coverage Analysis,**  
*J.H. Choi, M.Y. Ohn, C.H. Cho, J.Y. Huh, H.R. Hwang, J.T. Seo  
(Korea Power Engineering Company)*

**A Model for Single-Phase Counter-Current Natural-Convection  
Decay-Heat Removal in CANDU,**  
*P. Gulshani (Atomic Energy of Canada Limited) and C.H. Nguyen (Hydro-Québec)*



# SESSION 2B: Operations, Maintenance And Performance

*Chairs / Président: M. Léger (Atomic Energy of Canada Limited)*

## **Environmental Qualification of Medium-Voltage Motors,**

*I. Culbert and K. Dias (Ontario Power Generation, Inc.)*

## **The Evolution of Containment Idealizations for Point Lepreau,**

*R.A. Gibb and T.J. Chapman (New Brunswick Power),*

*M.S. Quraishi (Sadiq Yousuf Group)*

## **The Balanced Scorecard (BSC) Advantage: Driving Strategic Change into Canada's Nuclear Laboratory Site Operations,**

*P. Lafrenière (Atomic Energy of Canada Limited)*

## **Operational Performance of Wolsong CANDU Nuclear Power Plants,**

*C.-U. Yi and B.-S. Han (Korea Hydro and Nuclear Power Co., Ltd.),*

*T.K. Ramakrishnan and S. Azeez (Atomic Energy of Canada Limited)*

## **Implementation of a Task Qualification System at Point Lepreau Generating Station,**

*D.J. Kane (Sejant Systems Inc.), D.B. Reeves (Reeves Technologies Inc.)*

*and W. MacKeigan (New Brunswick Power)*



# SESSION 2C: Isotopes And Medical Applications

*Co-Chairs / Présidents: J.M. Cuttler (Cuttler and Associates Inc.),  
G. Malkoske (MDS Nordion)*

**Monte Carlo Methods for Radiation Therapy and Dosimetry,**

*D. Rogers and I. Kawrakow (Ionizing Radiation Standards, National Research Council)*

**Radiolabelling of Medical Devices with Y-90 Based upon Adsorption Induced by Sonication,**

*S. Oelsner, A. Chan and T. Simpson (MDS Nordion)*

**Cobalt-60 Production in CANDU Power Reactors,**

*G.R. Malkoske (MDS Nordion), J. Slack (Atomic Energy of Canada Limited) and J.L. Norton (MDS Nordion)*

**Isotope Production at the McMaster Nuclear Reactor - Yesterday, Today, Tomorrow,**

*E. Herzig (McMaster Nuclear Reactor)*

**Thresholds, Hormetic and Carcinogenic Effects of Low-Dose Irradiation**

**in Animals – Comparison with Human Data, P. Duport, B. Assif and**

*D. Murray (International Centre for Low-Dose Radiation Research, University of Ottawa)*

**Disinfecting Wounds with Radiation,**

*J.M. Cuttler (Cuttler and Associates Inc.)*



# SESSION 2D: Physics I

*Co-Chairs / Présidents: J.V. Donnelly (Ontario Power Generation, Inc.),  
A. Lone (Atomic Energy of Canada Limited)*

**The Verification of DRAGON: Progress and Lessons Learned,**  
*G. Marleau (École Polytechnique de Montréal)*

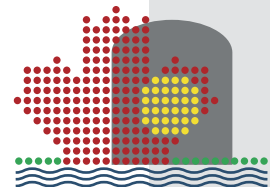
**Study of Coupling Effects in Steady-State CANDU Core for Different Operating Conditions,**  
*B. Dionne (University of Florida),  
J. Koclas and A. Teyssedou (École Polytechnique de Montréal)*

**Application of the Borax Experiments to the McMaster Nuclear Reactor,**  
*S. Day (McMaster University)*

**Measurement of the Axial Distribution of Thermal Neutron Flux Beside  
NRU Loop Fuel Test Sites,**  
*T. C. Leung (Atomic Energy of Canada Limited)*

**Validation of WIMS-IST,**  
*J.D. Irish and S.R. Douglas (Atomic Energy of Canada Limited)*

**Validation of Fuel Exit Burnup from RFSP-IST/WIMS-IST Based on  
CANDU 6 Operations,**  
*M.A. Shad (Atomic Energy of Canada Limited)*



# SESSION 3A: Aging And Plant-Life Extension I

*Co-Chairs / Présidents: V.K. Chaturvedi (Nuclear Power Corporation of India Limited),  
M. Wash (Organization of CANDU Industries)*

**Rehabilitation and Maintenance of Hatch Openings at Bruce B Generating Station,**  
*R. Lakhote, N. Page, B. McKinnon, D. Armchuk (Bruce Power)*

**The Possible Inhibition of Feeder Thinning by Titanium Dosing,**  
*R. Bateman and W. Cook (University of New Brunswick),  
M. Dymarski (Ontario Power Generation, Inc.),  
D.H. Lister (University of New Brunswick)  
and F. Steward (Centre for Nuclear Energy Research, Fredericton)*

**Eddy-Current Detection of Spacers in the Fuel Channels of CANDU Nuclear Reactors,**  
*T.W. Krause, J. Schankula and S.P. Sullivan (Atomic Energy of Canada Limited)*

**Fatigue Lifetime Evaluation for PHTS Pumps in Korean PLIM Study,**  
*H.Y. Roh, H.K. Youm, T.E. Jin (Korea Power Engineering Company),  
K.S. Lee and I.S. Jeong (Korea Electric Power Research and Institute Heui-young)*



## SESSION 3B: Safety I

*Co-Chairs / Présidents: J. Luxat (Ontario Power Generation, Inc.),  
B. Shalaby (Atomic Energy of Canada Limited)*

**Mechanistic Modeling of Heat-Transfer Processes Governing Pressure-Tube-To-Calandria-Tube Contact and Fuel-Channel Failure,**  
*J.C. Luxat (Ontario Power Generation, Inc.)*

**Prediction of Transient Temperatures in EFADS Charcoal Filters under Accident Conditions,** *A. Kosmatos and K.R. Weaver (Ontario Power Generation, Inc.)*

**Probabilities of Failure of a Seam-Welded Calandria Tube after a Spontaneous Pressure-Tube Rupture,** *Q.M. Lei and M.H. Bayoumi (Ontario Power Generation, Inc.)*

**Integrity of Fuelling-Machine Pressure Boundary Under Flow Reversal During Defuelling,** *N.N. Wahba and M.H. Bayoumi (Ontario Power Generation, Inc.)*

**High-Temperature Transient Creep Properties of CANDU Pressure Tubes,**  
*R.W.L. Fong and C.K. Chow (Atomic Energy of Canada Limited)*

**Pickering NGS B: Core-Damage-State Progression Timing for Severe-Accident Analysis,** *N.N. Wahba, M.H. Bayoumi and S.G. Lie (Ontario Power Generation, Inc.)*

**Thermalhydraulic Safety Parameters for the McMaster Nuclear Reactor,**  
*R. Pasuta (McMaster Nuclear Reactor)*





# SESSION 3C: Control And Instrumentation

*Co-Chairs / Présidents: E. Davey (Crew Systems Solutions),  
J. Popovic (Atomic Energy of Canada Limited)*

**Using Time Frequency Analysis for ICFD Noise Analysis in CANDU,**  
*V.N.P. Anghel (Atomic Energy of Canada Limited)*

**A Fiber Optic Instrumentation and Control Communications Scheme for Ontario Power Generation's Universal Delivery Machine,**  
*D.S. Winlow (GE Canada Nuclear Products)*

**Design Principles for CANDU Control Centres in Response to Evolving Utility Business Needs,**  
*E. Davey (Crew Systems Solutions)*

**Operational Validation - Current Status and Opportunities for Improvement,**  
*E. Davey (Crew Systems Solutions)*

**Bruce B Main Control Room Facilities Improvement Project,**  
*P. Rath (Bruce Power)*

**Validation of the AECL Response Time Tester,**  
*H.W. Hinds (Dynamic Simulation & Analysis Corporation),  
V.N.P. Anghel and B. Smith (Atomic Energy of Canada Limited)*



# SESSION 3D: Physics II

*Co-Chairs / Présidents: G. Marleau (École Polytechnique de Montréal),  
D. Serghiuta (Canadian Nuclear Safety Commission)*

**DRAGON Analysis of MOX-Fuelled VVER Cell Benchmarks,**  
*G. Marleau and F. Foissac (École Polytechnique de Montréal)*

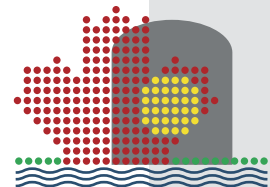
**Scripting DRAGON,**  
*A. Hébert (École Polytechnique de Montréal)*

**Robustness of Flux-Mapping Program Error-Correction Algorithm,**  
*M. Mamourian, W. Fieguth and D.B. Burjorjee (Atomic Energy of Canada Limited)*

**Using MCNP for In-Core Instrument Calibration in CANDU,**  
*D.C. Taylor (New Brunswick Power),  
V.N.P. Anghel and B.Sur (Atomic Energy of Canada Limited)*

**Reactor-Physics Innovations in the ACR-700 design for the Next CANDU Generation,**  
*M. Ovanes and P.S.W. Chan (Atomic Energy of Canada Limited)*

**Development of CP\_2D, a Two-Dimensional Transport FFCP Computer Code for  
CANDU Reactor Neutronic Analysis,**  
*M. Constantin (Institute for Nuclear Research, Pitesti, Romania)*



## SESSION 3E: Waste Management

*Co-Chairs / Présidents: K. Dormuth and M. Stephens (Atomic Energy of Canada Limited)*

### **High-Polymer-Based Composites for the Fabrication of Containers for the Long-Term Storage or Disposal of High-Level Radioactive Waste,**

*I. Miedema, H.W. Bonin, and V.T. Bui (Royal Military College of Canada / Collège militaire royal du Canada)*

### **Status of Canadian Postclosure Safety Assessment Models for a Deep Geologic**

**Repository for Used Fuel,** *A. D'Andrea, P. Gierszewski and F. Garisto (Ontario Power Generation, Inc.)*

### **Experience on Management of CANDU Spent Fuel in Korea,**

*H.-Y. Lee, B.-I. Choi, J.-H. Yoon and U.-S. Seo (Korea Hydro and Nuclear Power Co., Ltd./ Nuclear Environment Technology Institute)*

### **A Model for Predicting Fission-Product Activities in Reactor Coolant: Application of Model for Estimating I-129 Levels in Radioactive Waste,**

*B.J. Lewis (Royal Military College of Canada) and A. Husain (Kinectrics Inc.)*

### **Removal of Tile Holes Containing Intermediate-Level Radioactive Waste by Steel and Concrete Encapsulation,**

*M. Cleary (Ontario Power Generation, Inc.), P. Szabo (CH2M HILL), A. Buchnea (SCIMUS Inc.) and M. Cahill (Rankin Construction)*

### **Overview of Liquid Radioactive Waste Management and Radioactive Effluent Emissions for CANDU 6 Reactors,**

*K. Aydogdu (Atomic Energy of Canada Limited)*



# SESSION 4A: Plenary IIa – Plénière IIa

## The Present And The Future

*Chair / Président: D. Jackson (McMaster University)*

**Canadian Uranium in the World Market;  
Production at McClean Lake,**

*J. Rowson (COGEMA Resources Inc.)*

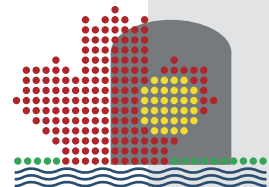
**MAPLE Reactors for Secure Supply of Medical Isotopes,**

*G. Malkoske (MDS Nordion) and*

*J.-P. Labrie (Atomic Energy of Canada Limited)*

**The Advanced CANDU Reactor -  
An Update on the Next Generation CANDU Product,**

*D.F. Torgerson (Atomic Energy of Canada Limited)*



# SESSION 4B: Plenary IIb – Plénière IIb

## A Look At Canada's Nuclear History

*Chair / Président: E. Horton*

**NPD, Canada's First Nuclear Power Station,**

*L. McConnell (Retired V.P. Ontario Hydro)*

**Early Development of Full-Scale Nuclear Power in Ontario,**

*W. Morison (MORWIL Inc.)*

**The Evolution of Procurement and Supply Conditions for CANDU Fuels,**

*E.G. Bazeley (E.G. Bazeley & Associates)*



# SESSION 5: Plenary III – Plénière III

## Future Challenges And Opportunities

*Chair / Président: K. Talbot (Bruce Power)*

### **Prototype CIRCE Plant -**

#### **Industrial Demonstration of Heavy-Water Production from Reformed Hydrogen Source,**

*D. Spagnolo, H.A. Boniface, R.R. Sadhankar, A.E. Everatt and  
A.I. Miller (Atomic Energy of Canada Limited),  
J. Blouin (Air Liquide Canada)*

### **Risk Management in the CNSC's Regulatory Program,**

*T. Viglasky (Canadian Nuclear Safety Commission)*

### **Update on Radioactive-Waste and Spent-Fuel Management in Korea,**

*M.-J. Song (Korea Hydro and Nuclear Power Co., Ltd., Nuclear Environment Technology Institute)*

### **Brief Updates on Ongoing Topics: Iter, IYNC, Waste Management Legislation,**

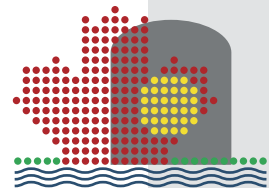
*M.J. Stewart (Iter Canada), A. McLean (University of Toronto), K.L. Smith (Unecan News)*

### **Current Priorities of the Canadian Nuclear Association,**

*W. Clarke (Canadian Nuclear Association)*

### **Servicing the Privatised Nuclear Industry in the Deregulated Electricity Market - UK Experience,**

*K. Routledge (NNC Canada Ltd.)*



# SESSION 6A: Aging And Plant-life Extension II

*Co-Chairs / Présidents: G. Balog (Ontario Power Generation, Inc.),  
P.D. Thompson (New Brunswick Power)*

**Preventive Maintenance Living Program (PMLP) Implementation at Bruce Power,**  
*B.J. Ferguson (Bruce Power) and L.J. Harazim (Duke Engineering & Services, Inc.)*

**Integrated Safety Review for the Point Lepreau Refurbishment for Life Extension,**  
*C.K. Scott (Atlantic Nuclear Services Ltd.), R. Jeppesen (Canadian Nuclear Utility Services),  
A.R. McKenzie (Atlantic Nuclear Services Ltd.), M.-A. Petrilli (Atomic Energy of Canada Limited),  
P.D. Thompson (New Brunswick Power)*

**Benefit-Cost Analysis in the Point Lepreau Refurbishment Planning Process,**  
*J.R. Humphries (Atlantic Nuclear Services Ltd.), P.D. Thompson (New Brunswick Power),  
M.-A. Petrilli and R. Jaitly (Atomic Energy of Canada Limited)*

**Refurbishment Strategy for F&P 4000 Series Controllers at  
Bruce Power-'B' Generating Facility,**  
*N. Khaloo (Bruce Power)*

**Optimizing the NPP Refurbishment Environmental Qualification  
Design Process for an In-Service Installation,**  
*M.J. MacBeth and R.L. Hemmings (Canatom-NPM)*



# SESSION 6B: Safety II

*Co-Chairs / Présidents: R. Chun (Bruce Power),  
V.G. Snell (Atomic Energy of Canada Limited)*

**Modifications of ACAP for Use in Accuracy Assessment of Safety Analysis Software at OPG,**  
*A.I. Popescu, J. Pascoe and J.C. Luxat (Ontario Power Generation, Inc.)*

**MAAP4-CANDU Analysis of a Generic CANDU 6 Station:  
Preliminary Results for a Large LOCA Scenario,**  
*S.M. Petoukhov and P.M. Mathew (Atomic Energy of Canada Limited)*

**Sensitivity Study of Voiding Rate During the Power-Pulse Phase of a Large LOCA,**  
*R.A. Prime (New Brunswick Power) and M.A. Wright (Wright Analytic)*

**Fuel Behaviour During a Power Pulse:  
A Review and Assessment of Reactivity Initiated Accident (RIA) Test Data,**  
*J.C. Luxat (Ontario Power Generation, Inc.)*

**Analysis of Gentilly-2 Pump Trip Tests Showing the Effect of Electrical Forces  
on Pump Rundown,**  
*K. Joober (ENAQ), R. Girard, A. Baudouin and G. Hotte (Hydro-Québec)*

**Consequences Assessment for Fuel-Channel Failure with Consequential  
Moderator Drain,** *N.N. Wahba and M.H. Bayoumi (Ontario Power Generation, Inc.)*





# SESSION 6C: Management Issues; Public Acceptance

*Co-Chairs / Présidents: S. Guellouz (Royal Military College of Canada),  
J. J. Whitlock (Atomic Energy of Canada Limited)*

**Memetic Engineering and Public Acceptance,**  
*J.J. Whitlock (Atomic Energy of Canada Limited)*

**Decision Making in the Digital Age: The Nuclear Industry Response,**  
*G. Edelman (Energy Group, Kepner-Tregoe, Inc.)*

**Risk: What is acceptable?,**  
*J.V. Jovanovich (University of Manitoba)*

**Coaching for Improved Personal and Organizational Effectiveness,**  
*K. Miller (New Brunswick Power) and  
R.A. Williams (Briant-Williams, LLC)*

**Risks Inherent in Making Technical Judgements and Means to Avoid Those Risks,**  
*K.R. Weaver (Ontario Power Generation, Inc.)*

**Media, Environmentalists and Nuclear Professionals,**  
*J.V. Jovanovich (University of Manitoba)*



# Student Conference / Conférence étudiante

*Chair / Président: J. Koclas (École Polytechnique de Montréal)*

## **The ITER Fusion Reactor and Its Role in the Development of a Fusion Power Plant,**

*Adam McLean (Institute for Aerospace Studies, University of Toronto)*

## **Étude préliminaire de la physique du NG CANDU,**

*R.P. Chambon, D. Rozon, G. Marleau et E. Varin (Institut de génie nucléaire, École Polytechnique de Montréal)*

*– Master's Level; Supervisor: Prof. D. Rozon*

## **An Adaptive General Multigroup Method,**

*Ibrahim K. Attieh and Ronald E. Pevey (University of Tennessee, Knoxville)*

*– Ph.D. Level; Supervisor: Prof. R.E. Pevey*

## **Heat-Conduction Shape Factor for CANDU Adjuster Bundles,**

*Matthew R. Turk and Stefan P. Szkwerek (Department of Mechanical Engineering, Royal Military College of Canada)*

*– Undergraduate Level; Supervisor: Prof. S. Guellouz*

## **Characterization of Two-Phase Flow Patterns by the Simultaneous Determination of the Complex Components of the Electrical Impedance,**

*M. Berdaï and A. Teyssedou (Institut de Génie Nucléaire, École Polytechnique de Montréal)*

*– Graduate Level; Supervisor: Prof. A. Teyssedou*

## **Biophysical Dosimetry using Electron Paramagnetic Resonance in Human Tooth,**

*Rao F.H. Khan <sup>1</sup>, W.J. Rink <sup>2</sup>, and D.R. Boreham <sup>1</sup> (<sup>1</sup>Medical Physics and Applied Radiation Sciences Unit,*

*<sup>2</sup>School of Geography and Geology, McMaster University) – Graduate Level*

## **Radiolytic Formation of Organic Iodides from Organic Compounds Released from Ripolin Paint,**

*Sarah Attia and Greg J. Evans (Department of Chemical Engineering and Applied Chemistry,*

*University of Toronto) – Undergraduate Level; Supervisor: Dr. G.J. Evans*

## **Social Trust and Ionizing Radiation,**

*Ellen Meadd (Faculty of Environmental Studies, York University)*

*– Ph.D. Level; Supervisors: Dr. Audrey Armour, Dr. Harris Ali, and Dr. Fred Fletcher*



# SESSION 6D: Looking To The Future

*Co-Chairs / Présidents: H. Bonin (Royal Military College of Canada),  
J.W. Love (Atomic Energy of Canada Limited)*

**Finally, Nuclear Engineering Textbooks with a Canadian Flavor!**  
*H.W. Bonin (Royal Military College of Canada / Collège militaire royal du Canada)*

**Thermo-Economic Assessment of Advanced, High-Temperature CANDU Reactors,**  
*N.J. Spinks, R.B. Duffey and N. Pontikakis (Atomic Energy of Canada Limited)*

**Design Characteristics of ACR-700,**  
*J.W. Love, K.F. Hau, T. Mahendralingam (Atomic Energy of Canada Limited)*

**Perspectives on the Role of Nuclear Energy in Affecting Climate-Change Issues,**  
*T. Poehnell, J. Tamm, A. Millar and R.B. Duffey (Atomic Energy of Canada Limited)*

**Fuel-Cycle Options for Sustainability in the ACR-700 Reactor,**  
*K. Evans, G. Dyck, J.M. Hopwood and P.G. Boczar (Atomic Energy of Canada Limited)*



# SESSION 6E: Radiation

*Co-Chairs / Présidents: R. Khaloo (Atomic Energy of Canada Limited),  
J. Tamm (Atomic Energy of Canada Limited)*

**The Potential of Radionuclides in the Control of Subterranean Termites in Toronto,**  
*T. Stevens*

**Radiation Protection at Radioisotope Processing Facilities,**  
*L.R. Hillier and R. Decaire (MDS Nordion)*

**Dose Calculations Using the Atmospheric Dispersion and  
Dose Analysis Method (ADDAM),**  
*Y. Zhuang, R. Khaloo and C.R. Boss (Atomic Energy of Canada Limited)*

**ARTEMIS: A 3D Transport Code for Shielding Calculations,**  
*E. Varin (Commissariat à l'Énergie Atomique, DIF et École Polytechnique de Montréal),  
G. Samba (Commissariat à l'Énergie Atomique, DIF) and  
R. Roy (École Polytechnique de Montréal)*

**Class II Nuclear Facility,**  
*R. Jammal (Canadian Nuclear Safety Commission)*

