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### Session 1 - Plenary:

F. Boulot - "Fine Numerical Modelling of Thermohydraulic Phenomena in EdF PWR Reactors" (EdF, France) (Invited)

I. Shepherd et. al. - "The Quest for Prototypical Conditions in the Phebus-FP Containment" (CEC Joint Research Centre, Italy) (Invited)

S. Banerjee - "Direct Simulation of Multiphase Flows" (Univ. of California -Santa Barbara, USA) (Invited)

B. Hanna et. al. - "Recent Developments in the CATHENA Two-Fluid Thermalhydraulics Code" (AECL, Canada)

C. Garzenne, J.C. Lefebvre - "Transport/Diffusion Equivalence Method in the EdF Neutronic Calculation Scheme: Application to EPICURE Experiment Interpretation" (EdF, France)

### Session 2A - Thermalhydraulics-Methodology:

W.S. Liu et. al. - "TUF Version Control and Development Status" (Ontario Hydro, Canada)

P. Gulshani et. al. - "A Model for Computing Two-Phase Pressure Drop in Vertical U-Tube Steam Generators and its Application to Thermosyphoning" (AECL, Canada)

P.T. Wan et. al. - "Modelling of RD-14M Partial-Inventory Thermosyphoning Tests Using the OHAT Code" (Ontario Hydro, Canada)

K. Crentsil et. al. - "A Homogeneous Non-Equilibrium Critical Flow Model for Leak Rate Predictions" (Ontario Hydro, Canada)

M. Asok Kumar - "THYC-3D A Computer Code for Thermalhydraulic Analysis" (Indira Gandhi Centre for Atomic Research, India)

### Session 2B - Reactor Physics Methods:

A.M. Ougouag, W. Fitzpatrick, "An Inherently Parallel Multigroup Nodal Diffusion Method for Hexagonal-Z Geometry" (EG&G Idaho, USA)

X. Warin - "Kinetic Methods for the Diffusion Equations in Nuclear PWR", (EdF, France)

B.R. Lewis, M.R. Steelman - "Detailed Reactor Analysis Code Simplifies Monte-Carlo Transport Calculations" (Atom Analysis, USA)

J.P. Argaud - "A Discrete Optimization Method for Nuclear Fuel Management" (EdF, France)

S. Kitsos, L. Luneville - "A Modified Point Kernel Method to Estimate Reaction Rates in Reactors" (CEA, France)

### Session 2C - Moderator and Containment Systems:

J.R. Travis, T.L. Wilson - "GASFLOW: The Theoretical Model to Analyze Accidents in Nuclear Containments, Confinements and Facility Buildings" (Los Alamos National Laboratory, USA) (Invited)

K.T. Tsang et. al. - "A Simulation of the Containment Activity Monitor" (AECL, Canada)

X. Wu, J. Szymanski - "Spatial Convergence of Flow Solutions Obtained With MODTURC\_CLAS" (Ontario Hydro, Canada)

K.J. Um - "Bruce NGS A/B Assessment of Reactor Vault Fans on Air Mixing Patterns" (Ontario Hydro, Canada)

S. Anil Lal et al. - "Thermal Hydraulic Simulation of Moderator Heat Exchanger" (Indira Gandhi Centre for Atomic Research, India)

### Session 3A - Thermalhydraulics-Methodology:

F.B.P. Tran, A.P. Muzumdar - "LINAC: An Acoustic Model for the CANDU-PHT System" (Ontario Hydro, Canada)

J.K. Szymanski - "A Hydraulic Model of a Liquid Injection System with Gas Pockets" (Ontario Hydro, Canada)

R. Q-N Zhou, "Numerical Solution of 3D Stokes Problems" (AECL, Canada)

A.O. Banas et. al. - "Numerical Studies of Flow and Heat Transfer Around Fuel-Element Bearing Pads" (AECL, Canada)

I. Toumi, P. Raymond - "Generalized Roe's Numerical Scheme for a Two-Fluid Model" (CEA, France)

### Session 3B - Fuel and Fuel Channels:

M. Bayoumi et. al. - "Post-Test Simulation of the First CHAN 28 Element Experiment (Verification of CHAN-II (MOD 6) Against Experiment)" (Ontario Hydro, Canada)

P.J. Reid, F.C. Iglesias - "Deposition-Dominated Coolant Activity Analysis" (Ontario Hydro, Canada)

M. Tayal et. al. - "Elastic-Plastic Stress Distributions Near the Endcap of a Fuel Element" (AECL, Canada)

B. Linet, X.Z. Suo - "The METEOR/TOUTATIS Code: A 2-D/3-D Code for Fuel Behaviour Simulation" (CEA, France)

E.K. Zariffah et. al. - "CANDU Bundle Junction: Misalignment Probability and Pressure Drop Correlation" (AECL, Canada)

### **Session 3C - Reactor Control and Operation:**

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M. Gauthier, M. Sabourin - "Real-Time Simulation of the Korean Multipurpose Nuclear Research Reactor" (AECL, Canada)

C. Papas et. al. - "Development and Testing of the Control Algorithm of the Korean Multipurpose Research Reactor" (AECL, Canada)

S.S. Godbole, G.F. Malan - "Low Cost/Risk Approach for Verifying Modifications to Dynamic Plant Operation and Instrumentation & Control System Resulting from Steam Generator Replacement" (BWNS, USA)

K.C. Gross, K.K. Hoyer - "Reactor Parameter Simulation System" (ANL, USA)

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J.C. Kitley et. al. - "Validation of the ASSERT Sub-Channel Code for Prediction of CHF in Standard and Non-Standard CANDU Bundle Geometries" (AECL, Canada)

N.N. Wahba et. al. - "A Generalized Critical Heat Flux Correlation for CANDU Fuel Geometries" (Ontario Hydro, Canada)

G. Hotte, T. Jouhanique - "An Investigation into the Accuracy of CHF Modelling in One-Dimensional Two-Phase Flow Analyses" (Hydro Quebec, Canada)

S. Sutradhar et. al. - "Prediction of Transient Post-Dryout Heat Transfer in Tubes" (AECL, Canada)

M.B. Carver et. al. - "Validation of ASSERT Subchannel Code for Maple-X10 Reactor Conditions" (AECL, Canada)

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Q.M. Lei et. al. - "Post-Test Analysis of the 28 Element High Temperature Thermal-Chemical Experiment CS28-1" (AECL, Canada)

M. Krause et. al. "Thermal Analysis of Bearing Pad to Pressure Tube Contact Heat Transfer Using ABAQUS" (AECL, Canada)

D.J. Wallace, L.G. Nelson - "Thermalhydraulic Analysis of Small-Scale Tube Rupture Experiments" (AECL, Canada)

T.K. De, R. Boyd - "Thermal Simulation of the CANDU (Pickering) Fuelling Machine During Refuelling" (AECL, Canada)

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R. Robinson, D.G. Parkinson - "Improving Flux Tilt Control While Adjuster Control Rods are Removed from the Pickering NGS A Reactor" (Ontario Hydro, Canada)

M.S. Milgram - "Void Reactivity Predictions for an Infinite Lattice of 37-Element CANDU Fuel" (AECL, Canada)

H.J. Smith et. al. - "Advances in the Physics Modelling of CANDU Liquid Injection Shutdown Systems" (Ontario Hydro, Canada)

R. Roy et. al. - "Modelling of CANDU Reactivity Mechanisms with DRAGON" (Ecole Polytechnique, Canada)

D. Jenkins et. al. - "Simulating Fission Product Transients Via the History-Based Local-Parameter Methodology" (AECL, Canada)

#### Session 5A - Safety Analysis:

S.M. Modro, R.J. Beelman - "Simulation Problems of Advanced LWRs" (EG&G Idaho, USA) (Invited)

J.T. Rogers, J. Slaby - "LOPWAT2: An Improved Thermohydraulic Code for LOPWA Analysis for a SES-10 Reactor" (Carleton University, Canada)

F. de Pasquale - "ROSA-IV, LSTF 5% Cold Leg Break Analysis Using the RELAP5/Mod 2 Code" (Paul Scherrer Institut, Switzerland)

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A. Hebert - "Superconvergent Finite Difference Discretization for Reactor Calculations" (Ecole Polytechnique, Canada)

G. Marleau et. al. - "Use of Specular Boundary Conditions for CANDU Cell Analysis" (Ecole Polytechnique, Canada)

J. Koclas et. al. - "Drift Effects in CANDU Reactors" (Ecole Polytechnique, Canada)

G. Abu-Zaied - "An Advanced BWR Core Design Using Circular Fuel Bundles" (Paul Scherrer Institut, Switzerland)

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A.P. Muzumdar, M.H. Choi - "WHAM Acoustic Model Improvements and Comparison Against Stern Labs Data" (Ontario Hydro, Canada)

P. Tye et. al. - "The Counter-Current Flooding Limit in Vertical Tubes With and Without Orifices" (Ecole Polytechnique, Canada)

J.C. Amrouni et. al. - "Thermosyphoning Model and Experimental Verification with RD-14 Tests" (ENAC, Canada)

J.P. Mallory, N.R. Popov - "Validation of CATHENA Against Feeder Refill Experiments" (AECL, Canada)

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### Session 6A - Safety Analysis:

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M.Z. Farooqui, N.T. Le, - "Simulation of a Large Break Loss of Coolant Accident With TUF and SMOKIN Computer Codes" (Ontario Hydro, Canada)

F. de Pasquale - "SB-LOCA Analysis of a Westinghouse Two-Loop PWR, Using the RELAP5/Mod2.5 Code" (Paul Scherrer Institut, Switzerland)

D-J. Oh et. al. - "Predictions of Fuel Channel Behaviour for Large LOCA in CANDU Reactors" (KAERI, Korea)

J.H. Choi et. al. - "CANDU 6 Steam Line Break Analysis With CATHENA" (KAERI, Korea)

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B.S. Philips, J.Y. Stambolich, - "Development of a Computerized Shutdown Heat Sink Manual" (Ontario Hydro, Canada)

G.R. McGee, W.M. Cichowlas - "Thermal Performance Monitoring at Pickering NGS Using THERMAC" (AECL, Canada)

W.J. Garland et. al. - "Towards a Generic Operational Support System" (McMaster University, Canada)

A.P. Firla - "Statistical Analysis of Spread-Check Limits with Median-Type Estimators" (Ontario Hydro, Canada)

