

Canadian Nuclear Achievement Awards



Canadian Nuclear Society/

Canadian Nuclear Association

2004 Awards Program

Hotel Marriott Eaton Centre,
Toronto, Ontario, Canada
Tuesday, June 8, 2004

W. B. Lewis Medal – Dr. Michel Pettigrew



Professor Pettigrew is a recognized authority in flow-induced vibration and the associated frictional and fretting wear. He has also made significant contributions in studies of vibration of rotating machinery and of elastic-plastic deformation of structures. He has published extensively on these subjects, and is well known for the clarity of his presentations.

Professor Pettigrew received his B.Sc.A. (Hons) from École Polytechnique in Montréal and obtained a Diploma in Applied Mathematics as an Athlone Fellow at the University of Sheffield in the UK. He obtained an M.Sc. in Mechanical Engineering at the University of Birmingham. He then joined AECL Chalk River, where he had a successful career spanning 35 years. He worked on flow-induced vibration, initially of CANDU fuel bundles and then of heat-exchanger tubes. The latter, in particular, involved years of laboratory testing to understand the flow and vibration response of tubes in highly complex configurations. His work led to quantitative models of the fretting-wear rate of various tube and support-material combinations, and to the development of a suite of computer codes to predict tube-vibration behaviour.

On retiring from AECL in 2000, Michel Pettigrew was appointed as the Chair of Fluid Structure Interaction at École Polytechnique, funded by B&W Canada, AECL and NSERC. In a short time, he created a centre of excellence, attracting renowned researchers and graduate students to tackle complex engineering problems

PURPOSE OF THE AWARD:

To recognize each year a Canadian scientist or engineer who has demonstrated a level of technical competence and accomplishment in the field of nuclear science and engineering as exemplified by the late Dr. W.B. Lewis during his involvement in the Canadian nuclear energy programme, 1946 to 1973.

Ian McRae Award of Merit - Mr. Duncan Hawthorne



Duncan Hawthorne, President and CEO, Bruce Power, has emerged as one of the most respected and influential leaders in the Ontario electricity sector. He displayed outstanding ability to articulate a vision, overcome adversity and provide dynamic and innovative leadership that has encouraged the enthusiastic support of the staff and the local communities at a crucial time for the Canadian nuclear industry.

With an honours degree in control engineering and an MBA from Strathclyde University in Glasgow, Duncan Hawthorne has held senior positions in major power engineering companies in the UK and North America.

When Bruce Power's parent company faced severe financial problems, Duncan Hawthorne ensured that Bruce Power would not only survive the crisis with new ownership, but also emerge stronger than before. He became a pivotal figure in a complex, multi-million dollar deal that satisfied the diverse needs of two public companies, two trade unions, a giant pension fund and governments on two continents. Duncan Hawthorne attracted an all-Canadian consortium to replace British Energy in a new-look private/public partnership.

He set and met many ambitious targets to improve the Bruce B station, which played a major role in helping Ontario through a very difficult 2003. Having met the challenge of returning Bruce A Units 3 and 4 to service, Duncan has refocused his team to the business case for restarting Units 1 and 2, refurbishing the four Bruce B units, and determining the feasibility of a new reactor on the site.

PURPOSE OF THE AWARD:

The purpose is to honour an individual for outstanding contributions, other than scientific, to nuclear energy in Canada.

CNS Fellow – Dr. Parviz Gulshani



Parviz Gulshani obtained a B.Sc. in physics from the University of Western Ontario and a M.Sc. and a Ph.D. in nuclear physics from the University of Toronto. After post-doctoral research at McMaster University, he joined AECL, where he began work on thermalhydraulics and safety analysis. He has worked in model development and in the areas of flow stability, flow regime for decay-heat removal, thermosyphoning, header-refill and feeder-refill behaviour, among others. Parviz developed models which led to the understanding of thermalhydraulics phenomena, and which were applied in safety assessments and in process-system modifications in the CANDU 6 reactors. He also contributed to model development and safety analysis carried out by AECL for RBMK reactors. He has also worked on MAPLE-reactor safety analysis in the last few years.

Parviz Gulshani has also contributed significantly to the Canadian Nuclear Society. He served as Chairman of the Sheridan Park Branch of the CNS from 1999 to 2004. Under his leadership the Branch continued as one of the most active, with an excellent record of seminars year after year. Parviz was an elected member of CNS Council for several years. He has served as Chairman of the Intersociety Committee, and was instrumental in the CNS joining the Engineering Institute of Canada. Parviz's contribution in all these capacities has played an important role in the continuing success of the CNS.

PURPOSE OF THE AWARD:

CNS members who have been designated “Fellows of the Canadian Nuclear Society” belong to a membership category established by the Society in 1993 to denote outstanding merit.

Outstanding Contribution Award – Dr. Brien Stewart



Brien Stewart received a Ph.D. in chemical engineering at the University of British Columbia. He joined Ontario Hydro in 1971. Following his early career with OH's Central Nuclear Services, including an assignment at Chalk River in the development of heavy-water processes, Brien moved to Nuclear Systems, Design and Development and was a major player in the success of the Darlington Project from its early inception through to full operation. Brien's leadership was outstanding in resolving several major technical issues experienced during commissioning and early operation of the Darlington plant. One was the resolution of the licensing issues associated with the software for the two shutdown systems, which was essential to obtaining Darlington's operating license. Another was the resolution of the fuel-bundle fretting and end-plate cracking problems. Both of these were crucial issues in Darlington's early years, and Brien's team leadership in resolving these problems was vital in bringing the units to full-power operation.

Brien made a significant and lasting contribution to the overall staffing strategy within Ontario Hydro through his lead role in the Joint Redeployment Planning Team. Brien also made a very important contribution to the return of Pickering Unit 4 to service. As Director of Engineering, he led the implementation of many design upgrades and the fulfilment of many outstanding regulatory commitments.

PURPOSE OF THE AWARD:

To recognize each year Canadian-based individuals, organizations or parts of organizations that have made significant contributions in the nuclear field, either technical or non-technical. There are two categories of the award, one for individuals and another for organizations or parts of organizations.

Outstanding Contribution Award – Mr. Ken Talbot



Ken Talbot, Executive Vice President and Chief Engineer, Bruce Power, has served the nuclear industry nationally and internationally with great distinction. Most recently, he played a very strong leadership role in achieving the rapid return to service of Bruce Units 3 and 4 after a six-year lay-up, and in the continued excellent performance of Bruce B. With an honours degree in mechanical engineering in the UK, he immigrated to Canada in 1970. Following training at Ontario Hydro's NPD, Ken was transferred to help start up Pickering A. He took on positions of increasing responsibility and his appointment as Pickering B Commissioning Manager won wide approval because of his intimate knowledge of CANDU systems, the high standards he set for himself and his appreciation of the efforts of others. He also managed the operational aspects of retubing and rehabilitating Pickering Units 1 and 2. From 1988 to 1991, he was Manager, Corporate Program (Nuclear) for Ontario Hydro. In 1995/6, Pickering had major operational difficulties, resulting in the shutdown of all eight reactors. Ken Talbot was sent there, and he motivated the employees in their efforts to return the units to service. He left Ontario Power Generation in 1997 to provide consulting services internationally. In 2001, Ken was asked to help form and help lead Bruce Power.

Ken was CNS President in 1988/9, and, throughout his career, he has been making important contributions to the CNS, the ANS and international nuclear industry organizations.

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Outstanding Contribution Award – Dr. John Luxat



John Luxat has made significant contributions to safety analysis of CANDU reactors through his ability to specify and interpret R&D findings and apply them to analytical codes to develop safety cases.

John Luxat received his B.Sc. and M.Sc. in electrical engineering from the University of Cape Town, South Africa, and his Ph.D. in electrical engineering from the University of Windsor. He held a number of positions in consulting firms in Canada before joining Ontario Hydro in 1977. In 25 years at Ontario Hydro, Ontario Power Generation and Nuclear Safety Solutions, John has been a key contributor in the areas of spatial reactor kinetics, trip assessment, multiphase thermal hydraulics and interpreting R&D results to practical purposes through his understanding of nuclear science and engineering. He has initiated and conducted cooperative projects in nuclear safety and nuclear technology that have contributed to the successful licensing and safe operation of CANDU reactors in Canada.

John has also represented Ontario Hydro, OPG and Canada on international projects and in the activities of international organizations such as the IAEA. In the near future, Dr. Luxat will take up a new professorship at McMaster University.

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Education & Communication Award - Mr. Clair Ripley



Clair Ripley has been for many years on the front lines of communicating the peaceful applications of nuclear science and technology in Canada and in particular in the Atlantic Provinces. He has been an essential developer and organizer of science and nuclear-related education programs. Clair has conducted the education outreach program sponsored by Atomic Energy of Canada Limited since 1993. The efforts necessary to achieve success have included workshops, scholarship programs, speaking engagements and conference organization. His specific achievements include journalist seminars, developing a nuclear unit for high school curricula and the organizing of regular workshops for Atlantic Canada science teachers.

Clair's outreach programs have built strong links among industry, government, teachers and academia on the importance of science education and the value of nuclear science and technology. His work in nuclear science communications has been supplemented by a long history of activity in community organizations and support groups.

Clair is a man of warmth and courtesy. He is a role model for communicating the value of science and nuclear technology to both the public and to the education community.

PURPOSE OF THE AWARD:

The Education/Communication Award was established by the Canadian Nuclear Society in 1997. This award recognizes the recipients for "*significant efforts in improving the understanding of nuclear science and technology among educators, students and the public*".

R. E. Jervis Award – Mr. Bill Santos



Bill Santos is awarded the R. E. Jervis Award for his research into the influence of film formation/corrosion product deposition processes on the dissolution of nuclear fuel under permanent waste-disposal conditions.

Bill's work involved a determination of the redox-dependence of film formation processes on uranium dioxide using a combination of electrochemical and X-ray photoelectron spectroscopic techniques. His results allow separation of the oxidation of UO_2 into a hole-injection process to produce U^{v} containing UO_{2+x} , important to the processes that drive dissolution and a deposition process to produce a U^{VI} -containing solid that blocks the dissolution process.

In addition, his work is demonstrating that acidity can develop under the corrosion products, and he is looking at the influence of groundwater on the process. He is finding that the calcium content in the groundwater can inhibit the corrosion process.

Bill Santos is a graduate student at the University of Western Ontario under the supervision of Dr. D.W. Shoesmith in the Department of Chemistry

PURPOSE OF THE AWARD:

The Award recognizes excellence in research and development carried out by a full time graduate student in nuclear engineering or related fields described below. The Award was established in 1992 by former students of Professor Robert E. Jervis of the University of Toronto, and the CNS to honour his achievements. The Award was in the past administered by the University of Toronto, and is now sponsored and administered by the Canadian Nuclear Society.

The W.B. Lewis Medal

2003 - Ronald E. Mitchel	1986 - Eugene Critoph
1999 - David Torgerson	1985 - Harold E. Johns
1998 - John Davies	1984 - Franc Joubin
1997 - Douglas Chambers	1983 - Albert Pearson
1996 - Donald Hurst	1982 - Ernest Siddall
1994 - Terrance E. Rummery	1981 - Robert G. Hart
1993 - J. Terry Rogers	1980 - Ara Mooradian
1992 - Joseph McKeown	1979 - John S. Foster
1991 - Robert E. Jervis	1978 - William G. Morison
1990 - Daniel A. Meneley	1977 - Arthur G. Ward
1989 - Gordon Brooks	1976 - John W. Hilborn
1988 - Brian Cox	1975 - George C. Laurence
1987 - Archie Robertson	1974 - Harold A. Smith

The Ian McRae Award

2003 - Paul Koenderman	1988 - James Donnelly
2002 - Stu Groom	1987 - John Kostiuk
1999 - Reid Morden	1986 - Arthur O'Connor
1998 - Bernard Michel	1985 - William Bennett
1997 - Ralph Green	1984 - Larry Woodhead
1996 - Donald Anderson	1983 - Frank Foulkes
1995 - Robert Morrison	1982 - Roy Errington
1994 - Elgin Horton	1981 - George Pon
1993 - Walter Smith	1980 - John Runnalls
1992 - Paul Scholfield	1979 - Yvon de Guise
1991 - Stanley Hatcher	1978 - William Brown
1990 - Jon Jennekens	1977 - Lorne McConnell
1989 - Nicholas Ediger	

Outstanding Contribution Award

2003 - Syd Aldridge	1993 - Ernie Farris
2003 - René Godin	1993 - Werner Fieguth
2003 - Kenneth Petrunik	1993 - Hugh Irvine
2003 - Frank Stern	1993 - Richard Williams
2002 - Bal Kakaria	1993 - Groupe Pickering Unit 4 Retube/Rehab Team, Ontario Hydro
2002 - Bill Schneider	1992 - George Howey
2002 - Ken Smith	1992 - John Ingolfsrud
1999 - Michel Rhéaume	1992 - John Murphy
1997 - William Hancox	1992 - Kenneth McCallum
1997 - Alastair Miller	1992 - Groupe Wolsong 2 Negotiating Team, AECL/EACL, CANATOM
1997 - James Smith	1991 - John Dyke
1997 - Groupe Centre Canadien de Fusion Magnétique	1991 - Frank Finley
1997 - Ken Dormuth, Phyllis Gillespie, Sidney Whittaker	1991 - Noel O'Brien
1996 - Donald Lawson	1991 - Roger McKenzie
1996 - John D. Murphy	1990 - Ken Elston
1996 - Howard Rae	1990 - Les Haywood
1996 - Groupe NRX Team, 1947-1992	1990 - Don Hurst
1995 - Malcolm Harvey	1990 - Lloyd Secord
1995 - Norman Sagert	1989 - Norman Aspin
1994 - Don Charlesworth	1989 - Pat Campbell
1994 - Adi Dastur	1989 - Alan Lowell
1994 - Jack Howett	1989 - Benoit Michel
1994 - Ray Silver	1989 - K.G. Zimmerman
1994 - Groupe Pickering B "A" Crew, Ontario Hydro	1989 - Groupe Eldorado Nuclear Ltd./Eldorado Nucléaire Limitée

Fellows of the Canadian Nuclear Society

2003 - Ralph Green	1995 - Dave Torgerson
2003 - Hong Huynh	1995 - Bob Jervis
2002 - Brent Lewis	1995 - Michel Ross
2001 - Paul Thompson	1994 - Daniel Rozon
2000 - Jerry Cuttler	1994 - Stan Hatcher
1999 - Ben Rouben	1994 - Fred Boyd
1998 - Richard Bolton	1993 - Alan Wyatt
1998 - Hugues Bonin	1993 - Ken Talbot
1998 - Daniel Meneley	1993 - Terry Rummery
1997 - Edward Price	1993 - John Foster
1997 - Paul Fehrenbach	1992 - George Howey
1996 - Terry Rogers	1992 - John Hewitt
1996 - Bill Midvidy	1992 - Phil Ross-Ross

Innovative Achievement Award

2003 - Esam Hussein	1993 - Dé C. Groeneveld
2003 - Doug Beattie	1992 - Andrew Stirling
2000 - Ralph Hart	1991 - Wing Tao
1998 - Ray Metcalfe	1991 - Bill Morrison
1994 - Tom Holden	

Education/Communication Award

2003 - Clive Greenstock	1999 - Jeremy Whitlock
2002 - Adam McLean	1998 - Morgan Brown
2001 - Reza Moridi and William J. Garland	1998 - Ronald Hancock
2000 - Murray Stewart	1997 - Aslam Lone

John S. Hewitt Team Achievement Award

2003 - The Bruce A Restart Safety Analysis Team has made a crucial contribution to the success of Bruce Power in receiving a licence for the restart of Bruce A Units 3 and 4

2003 - AECL's Hydrogen Recombiner Development Team developed a passive autocatalytic hydrogen recombiner and has attained commercial success.

2000 - The Korean-Canadian Wolsong 2,3 & 4 Project Team (KEPCO, KOPEC, KAERI, DAEWOO, HANJUNG, HYUNDAI, AECL and CANATOM NPM) for outstanding teamwork in completing the Wolsong 2,3 & 4 Project on schedule.

2000 - T. Cousins, T.A. Jones, J.R. Brisson (DREO); J.E. McFee (DRES); T.J. Jamieson, E.J. Waller, F.J. Lemay (SAIC) and H. Ing, E.T.H. Clifford, E.B. Selkirk (BTI) for the creative conceptualization and innovative application of a thermal-neutron-activation-based system for detecting non-metallic land mines, allowing the effective detection and removal of these deadly devices.

1998 - Mr. John Skears, Dr. Charles Chang and Mr. Tung Toong, for the development of the SOPHT Computer Code.

1997 - C.C. Davison, K.W. Dormuth, P. Gillespie, M.A. Greber, K. Johansen, L.H. Johnson, G.R. Simmons, S. Whitaker, A.G. Wikjord, R. Zach, and all team members at Atomic Energy of Canada Limited and Ontario Hydro, for Development of the Concept, and Preparation of the Environmental Impact Statement for Disposal of Canada's Used Nuclear Fuel.

1996 - Staff of Point Lepreau G.S., for excellence in nuclear power plant operation and exceptional sustained plant performance.

1996 - Charles Kittmer, Roger Joynes and Larry Green, for the development and demonstration of micro-sampling of pressure tubes.

1995 - Don McLean, Bill Morgan and Mitch Ohta, for the development and demonstration of dry spent-fuel storage.

R.E. Jervis Award

2003 - Sarah Attia
(University of Toronto)
2002 - Tutun Nugraha
(University of Toronto)
2002 - Lt. Larry Unsworth
(Royal Military College)
2001 - Lt. Michael Walker
(Royal Military College)
1998 - Evon Reynolds
(University of Toronto)

1997 - Capt. Danny Pagé
(Royal Military College of Canada)
1997 - Mark Ho
(University of Toronto)
1996 - Sophie Wang
(University of Toronto)
1994 - Hilary Fritas
(University of Toronto),
Doug Pinto
(University of Toronto)

CNA International Award

2003: Dr. Robin Jeffrey, Past
Chairman and Chief Executive of
Bruce Power, and Past Chairman and
Chief Executive of British Energy

1991: Lord Walter Marshall, Charter
Chairman of the World Association of
Nuclear Operations (WANO) and
Past Chairman of the United Kingdom
Central Electric Generating Board
(CEGB).

1990: Lars Gustafsson, Senior Vice
President, Swedish State Power
Board

1988: Robert Janin, Director, Fuel
Division, Électricité de France

1986: Mr. William States Lee,
President and CEO of Duke Power

1985: Mr. Gaishi Hiraiwa, past
Chairman, President and CEO of
Tokyo Electric Power Company

CNS President's Award

2002 - Atomic Energy of Canada Limited

1997 - The Right Honourable Jean Chrétien, Prime Minister of Canada

2004 CNS/CNA Honours and Awards Committee

Mr. Ed Price,
Committee Chairman, CNS Past President.

Dr. Allan Kupcis, Chairman,
Canadian Nuclear Association.

Dr. Hugues W. Bonin,
CNS Past President.

Dr. Paul Fehrenbach,
CNS Past President.

Mr. Jon Jennekens,
formerly of IAEA and AECB.

Dr. Jerry M. Cuttler,
CNS Past President, Council Member.

Dr. Greg Evans,
University of Toronto. R.E. Jervis Sub -Committee.

Mr. Colin Hunt,
Director of Research & Publications, CNA.

Dr. David P. Jackson,
CNS Past President, Council Member.

Dr. Ben Rouben,
CNS Past President, CNS Council Secretary.

Mr. Ken Smith,
CNS Past President, Council member.

Mr. Paul D. Thompson,
Past H&A Chairman, CNS Past President.

Mr. Ed Hinchley,
CNS Treasurer, Executive Council Member.

Mr. Walter Thompson,
CNS 2nd Vice President, Executive Council member.

Logistical Support:

Denise Rouben - CNS Office