CURRICULUM VITAE
ARTHUR B. MCDONALD

Contact

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Academic Experience

Position	Institution	Year
Gray Chair Emeritus	Queen's University	2013 - Present
Director	Sudbury Neutrino Observatory Collaboration	1989 - Present
Gordon and Patricia Gray Chair in Particle Astrophysics		
	Queen's University	2006 - 2013
University Research Chair	Queen's University	2002 - 2006
Director	SNO Institute	1991-2003, 2006 - 2009
Associate Director	SNOLAB Institute	2009 - 2013
Professor	Queen's University	1989 - 2013
Professor	Princeton	1982 - 1989
Sr. Research Officer	Atomic Energy of Canada (Chalk River, Ontario)	1980 - 1982
Assoc. Research Officer	Chalk River	1975 - 1980
Assist. Research Officer	Chalk River	1970 - 1975
Postdoctoral Fellow	Chalk River	1969 - 1970

Education:
Dalhousie University, Halifax, Nova Scotia - B.Sc. Physics (1964)
Dalhousie University, Halifax, Nova Scotia - M.Sc. Physics (1965)
California Institute of Technology, Pasadena, CA, USA - Ph.D. Physics (1969)

Awards:
Governor General's Medal, Dalhousie, 1964
Rutherford Memorial Fellowship, (1969-1970)
Fellow of the American Physical Society, 1983
LL.D., *honoris caus*a, Dalhousie, 1997
Fellow of Royal Society of Canada, 1997
Honorary Life Membership at Science North, Sudbury, Ontario, 1997
Killam Research Fellowship, 1998
LL.D., *honoris caus*a, University College of Cape Breton, 1999
D. Sc., *honoris causa*, Royal Military College, 2001

T.W. Bonner Prize in Nuclear Physics from the American Physical Society, 2003
Canadian Association of Physicists Medal for Lifetime Achievement in Physics, 2003
Natural Sciences and Engineering Research Council of Canada Award of Excellence, 2003
Gerhard Herzberg Canada Gold Medal for Science and Engineering, 2003
UK-Canada Rutherford Lecturer for the Royal Society, 2003
Welsh Lecturer at the University of Toronto, 2004
Basterfield Lecturer at the University of Regina, 2004
Sigma Xi Fund of Canada Award for Scientific Achievement, 2004
Bruno Pontecorvo Prize in Particle Physics, JINR, Dubna, 2005
Manne Siegbahn Lecturer at Stockholm University, 2005
E.W. Guptill Lecturer at Dalhousie University, 2005
Helmut Baer Lecturer at University of Michigan, 2006
D. Sc., *honoris causa*, University of Chicago, 2006
NSERC John C. Polanyi Award to the SNO team, 2006
Officer of the Order of Canada, 2006
Co-recipient, Benjamin Franklin Medal in Physics, 2007
Donald R. Hamilton Lecturer at Princeton University, 2008
Huggins Science Lecturer at Acadia University, 2008
LL.D., *honoris causa*, Saint Francis Xavier University, 2009
Fellow of the Royal Society of the UK and the Commonwealth, 2009
Member of Canadian Science and Engineering Hall of Fame, 2009
Killam Prize in the Natural Sciences, 2010
Member of the Nova Scotia Discovery Centre Hall of Fame, 2010
E. Segre Lecture, Berkeley, 2010
D. Sc., *honoris causa,* University of Alberta, 2011
Guelph Waterloo Physics Institute Distinguished Lecturer, 2011
Henry Marshall Tory Medal, Royal Society of Canada, 2011
D. Sc., *honoris causa,* University of Waterloo, 2012
Member of the Order of Ontario, 2012
European Physics Society HEP Division Giuseppe and Vanna Cocconi Prize, 2013
Co-recipient, Nobel Prize in Physics, 2015
Companion of the Order of Canada, 2015
Honorary Fellow, Mansfield College, Oxford, 2015
D. Sc., *honoris causa,* Mount Allison University, 2016
D. Sc., *honoris causa,* University of British Columbia, 2016
Co-Recipient, Breakthrough Prize in Fundamental Physics (with the SNO Collaboration), 2016
Elected as a Foreign Associate of the US National Academy of Science, 2016
Member of the Order of Nova Scotia, 2016
D. Sc., *honoris causa,* McGill University, 2017
D. Sc., *honoris causa,* Queen's University, 2017
D. Sc., *honoris causa,* University of Toronto, 2017
W. B. Lewis Medal of the Canadian Nuclear Society, 2017
D. Sc., *honoris causa,* Laurentian University, 2018
Distinguished Alumnus, Caltech, 2018

D. Sc., *honoris causa,* University of Lethbridge, 2019
D. Sc., *honoris causa,* University of Winnipeg, 2019
Fellow of the American Association for the Advancement of Science, 2020
Fellow of the Canadian Association of Physicists, 2022

Present Memberships:

1964 - Present: Member of Canadian Association of Physicists
1969 - Present: Member of American Physical Society (Fellow 1983-present)
1998 - Present: Fellow of the Royal Society of Canada
2004 - Present: Member of the Professional Engineers of Ontario
2000 - Present: CIAR Cosmology and Gravity Program Associate (Chair of the Advisory Board, 2000-05)
2009 - Present Fellow of the Royal Society of the UK and the Commonwealth
2016 - Present Foreign Associate of the US National Academy of Science
1990 – Present Ongoing participation on many advisory committees for international conferences in particle physics
2023 – Present Member of the Copernican Academy, Poland

Past Committee Memberships:

1976 - 1979: Natural Sciences and Engineering Research Council (NSERC) of Canada, Subatomic Physics Grant Selection Committee
1978 - 1980: Canadian Association of Physicists Council
1986 - 1988: Nuclear Science Advisory Committee (NSAC) to U.S. Department of Energy and National Science Foundation
1986 - 1988: TRIUMF Experiment Evaluation Committee
1983 - 1985: NSAC Instrumentation Subcommittee
1985 - 1988: NSAC Nuclear Theory Subcommittee
1990 - 1993: U.S. Institute for Nuclear Theory Advisory Board
1992 - 1995: Lawrence Berkeley Laboratory, Nuclear Physics Division Review Committee
1992: Canadian Institute for Advanced Research (CIAR) Superconductivity Review Committee
1996: Canadian Institute for Advanced Research (CIAR) Cosmology Review Committee
1998 - 2002: Queen's University representative on TRIUMF Board of Management
2000 Conference Chairman, XIX International Conference on Neutrino Physics and Astrophysics, Sudbury, Ontario
2002 KATRIN Experiment International Review Committee, Karlsruhe, Germany
2003 Member of Advisory Committee for Selection of Project Manager for Thirty Meter Telescope Project (Caltech)
2004 Member of Review Committee for the Faculty of Arts and Science of the University of Toronto
1997 - 2004: IUPAP Committee on Particle and Nuclear Astrophysics and Gravitation
2005: Member of Neutrino Science Advisory Group for US National Science Foundation and US Department of Energy

1997 - 2006: Canadian Institute for Advanced Research (CIAR) Research Council
1997 - 2006: IUPAP Commission on Astrophysics (Secretary)
2002 - 2006: IUPAP Commission on Particle Physics (Assoc. member)
2003 - 2006: IUPAP Commission on Nuclear Physics (Assoc. Member)
2009: Member of Review Committee for Helmholtz Association program in Particle Astrophysics, Germany
2009 - 2010 Member of the Scientific Advisory Committee for the INFN-LNGS Gran Sasso Underground Laboratory
2010 - 2012 Member of the Scientific Advisory Board, Max-Planck-Institut für Kernphysik, Heidelberg
2011-2013 Member of the External Advisory Board for the Kavli Institute for Cosmological Physics and NSF Physics Frontier Center at the University of Chicago
2009 - 2015 Member of the Princeton University Physics Department Advisory Council
2016 - 2017 Member of Advisory Committee for the National Research Council of Canada
2016 - 2017 Member of Canadian Advisory Panel on Federal Support for Fundamental Science
2011 - 2018 Member of the Board of Directors of the Perimeter Institute, Waterloo
2023 KATRIN Experiment International Review Committee, Karlsruhe, Germany

Visiting Positions:
CERN, Geneva (2004), University of Hawaii (2004, 2009), Affiliate Graduate Faculty, University of Hawaii (2010-20), Oxford University (2003, 2009), University of Washington, Seattle (1978), Los Alamos National Laboratory (1981), Queen's University (1988)

Personal
Citizenship: Canadian
Married (four children, nine grandchildren)

Publications
Over 220 scientific publications. Google Scholar lists over 23,000 citations including 6 with citation numbers ranging from 872 to 5377 and an overall h index of 52.