Being on the UCAR Board of Trustees has given me valuable insights into the operations of UCAR and NCAR. I am a great believer in the importance of UCAR and NCAR to the science community and to our nation; therefore it is a great honor to be considered again for membership on the BoT. I am most interested in continuing to use my experience and capabilities to represent the member universities in the oversight and furthering the excellence of UCAR and NCAR.

UCAR is faced with many special challenges, in part because of there being a new UCAR President, and because of the increasing concerns about the government’s science budget. The nation is looking to our discipline more than ever before to lead the way in solving some of society’s most challenging problems (e.g., severe weather and climate change). UCAR and NCAR, in coordination with university partners, are well positioned to further understanding and finding solutions to these and other important issues. Keeping the UCAR and NCAR strategic plans on focus is an important goal of mine as a member of the BoT.

I deeply appreciate UCARs role in managing NCAR and the UCAR UCP in ways that supports, enhances, and extends the capabilities of its constituent university community. I have interacted closely with these programs for many years. The continued development and involvement of UCAR programs in the education process is a priority; one I plan to dedicate more of my time to during my second term on the Board.
Biographical Information

Donald James Wuebbles
The Harry E. Preble Professor of Atmospheric Sciences
University of Illinois

Biography

Donald J. Wuebbles is the Harry E. Preble Professor of Atmospheric Sciences at the University of Illinois. He is a professor in the Department of Atmospheric Sciences as well as an affiliate professor in both the Department of Civil and Environmental Engineering and in the Department of Electrical and Computer Engineering. He was the first Director of the School of Earth, Society, and Environment, from 2006 to 2008. He was Head of the Department of Atmospheric Sciences from 1994 until 2006. He was also the first Director of the Environmental Council at the University of Illinois, from 1996 until August 1999; as Director, he was responsible for the oversight and development of educational and research programs across the University of Illinois relating to the environment. Professor Wuebbles earned his B.S. (1970) and M.S. (1972) degrees in Electrical Engineering from the University of Illinois. He received his Ph.D. in Atmospheric Sciences from the University of California at Davis in 1983. Professor Wuebbles spent many years as a research scientist and group leader at the Lawrence Livermore National Laboratory before returning to the University of Illinois in 1994.

Professor Wuebbles is the author of over 400 scientific articles, most of which relate to the interactions of atmospheric chemistry and physical processes affecting atmospheric composition (e.g., tropospheric and stratospheric ozone, urban air quality), resulting radiative forcing on climate, and the effects on the climate system resulting from both human activities and natural phenomena. His research emphasizes the development and use of mathematical models of the chemical and physical processes in the atmosphere that affect all of these processes. Through his research, Professor Wuebbles has had a number of important science contributions and “firsts” during his career. Some of his early contributions include studies of the importance of both temperature feedback and multiple scattering on stratospheric composition, and a study demonstrating “diurnal” behavior of trace gases during a solar eclipse that led to a NASA measurement campaign during a solar eclipse. He developed one of the first comprehensive urban air quality models (which was used in the first study of its kind showing the VOC-limited (VOC = volatile organic compounds) behavior of ozone formation in the San Francisco area and one of the first two-dimensional models for studying atmospheric chemistry. In the last 1970s, he authored the most complete analysis of the effects of nuclear tests on stratospheric ozone done to date.

Professor Wuebbles’ research has had a direct impact on policies to protect the ozone layer. His early 1980s analyses of a broad range of halocarbon future scenarios had a significant impact on early ozone policy considerations. During that time period, he also developed the concept of Ozone Depletion Potentials used in most policymaking aimed at protection of the ozone layer (e.g., the Montreal Protocol and its amendments, the U.S. Clean Air Act). He coauthored a series of papers on trends in stratospheric ozone, including the first to statistically prove that a decrease in stratospheric ozone was occurring in the early 1980s. These papers led to Professor Wuebbles and colleagues receiving the Stratospheric Ozone Protection Award from the U.S. Environmental Protection Agency in 2005. Professor Wuebbles also coauthored the 1986 paper that provided the basic principles explaining the existence of the Antarctic ozone hole.
hole. Professor Wuebbles’ graphic of the effects of our evolving understanding of atmospheric chemistry and physics on ozone perturbations during the 1970s and 1980s is still used extensively to point out the historical process of learning in science. His 1991 paper on the relationship between solar flux variations and upper stratospheric ozone changes was the first to capture these interactions accurately. More recently, he also developed the revised concept for ODPs to account for the effects of short-lived halocarbons on ozone. For these many accomplishments, Professor Wuebbles was elected a member of the International Ozone Commission in 2000 (and reelected in 2008 as Director of Communications for the IO3C). In 2008, he was elected to the Board of Trustees for the University Corporation of Atmospheric Research.

As a convening lead author on the first and second international assessments of climate change sponsored by the UN’s Intergovernmental Panel on Climate Change (IPCC), Professor Wuebbles co-authored development of the Global Warming Potentials concept being used in policy considerations on greenhouse gases and their potential effects on climate; this concept is included in the Kyoto Protocol and most carbon trading applications. In a paper combining observations with theory, Professor Wuebbles and colleagues provided the first analysis showing that observed trends in lower stratospheric temperature could be explained in terms of the observed trends in ozone and carbon dioxide. In more recent studies, mostly with his students, Professor Wuebbles has used satellite-based trends of several gases to show that the dynamics of the stratosphere is being changed by climate change and that changes in climate could have a significant impact on air quality in the U.S.

Professor Wuebbles has been a lead author on a number of national and international assessments related to concerns about stratospheric ozone (including the recently WMO published Scientific Assessment of Ozone Depletion: 2006) and about climate change, and is also a lead author on several assessments of the effects of current and projected subsonic and supersonic aircraft on the global environment. He chaired a major workshop on the aviation effects on climate for the FAA and NASA in 2006 that resulted in a new research program in the U.S. to better understand these issues. In 2007, he co-chaired the Climate Panel for a major workshop for the UN’s International Civil Aviation Organization. Dr. Wuebbles has also led committees reviewing various programs in the U.S. Department of Energy and at its national laboratories. Dr. Wuebbles was a leader in assessments of the potential impacts of climate change on the Great Lakes region, the U.S. Northeast, and the city of Chicago, and is coauthor of the 2009 assessment of the understanding of potential climate impacts of climate change on the United States that was done for the U.S. Government. Amongst his honors, Prof. Wuebbles is a Fellow of both the American Association for the Advancement of Science and the American Geophysical Union. Dr. Wuebbles is a Faculty Fellow in the National Center for Supercomputing Applications. He, along with many others, shares in the 2007 Nobel Peace Prize for his work with the Intergovernmental Panel on Climate Change. He is a Convening Lead Author on the next international IPCC climate assessment. He was also recently chosen to be on the Federal Advisory Committee and the executive committee for the next U.S. National Climate Assessment.

At the University of Illinois, Dr. Wuebbles led the development of the School of Earth, Society, and Environment, and was its first director. He also has led the development of two highly successful undergraduate programs, one in Atmospheric Sciences, and the other, an interdisciplinary major, in Earth, Society and Environment (ESE). The ESE major is the fastest growing major on the Illinois campus and has over 180 students in its third year of existence. Dr. Wuebbles is leading the development of an online major in Environmental Sustainability and a Certificate program in Sustainability (the former is undergoing approvals while the latter is now operational).
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105 S. Gregory Street                            E-mail:  wuebbles@illinois.edu
Urbana, IL 61801

**Home Address**
3405 S. Persimmon Circle                            Phone:  217/328-6845
Urbana, IL 61801

**Nationality**
Citizenship: United States of America

**Education**
B.S., 1966-1970, University of Illinois, Urbana
M.S., 1970–1972, University of Illinois, Urbana
Ph.D., 1976–1983, University of California, Davis

**Honors or Awards**
NOAA Special Achievement Award, 1972
NASA Group Achievement Award, 1982
Eta Kappa Nu (Scholastics Honorary)
Sigma Tau (Scholastics Honorary)
Phi Eta Sigma (Scholastics Honorary)
Tau Beta Pi (Scholastics Honorary)
American Men and Women of Science, 1982–present
Who's Who in Frontier Science and Technology, 1983–present
International Who's Who of Contemporary Achievement, 1984–present
Men of Achievement, 1985–present
LLNL Special Achievement Award for Best Journal Paper, 1991
Who’s Who in America, 1993-present
LLNL Special Achievement Award for Best Book Publication, 1993
Dictionary of International Biography, 1994-present
Who’s Who in the World, 1994-present
Who’s Who in the Midwest, 1995-present
Five Thousand Personalities of the World, 1996-present
2000 Outstanding People of the 20th Century, 1997-present
Who’s Who in Science and Engineering, 1998-potent
Lexington’s Who’s Who, 1999-potent
International Directory of Distinguished Leadership, 2000-potent
2000 Outstanding Scientists of the 20th Century, 2000-potent
UCAR Advocate for Science Award, 2000
2000 Outstanding Scientists of the 21st Century, 2001-potent
Who’s Who in the 21st Century, 2001-potent
Outstanding People of the 21st Century, 2001-potent
One Thousand Great Scientists, 2002-potent
Who’s Who of Professionals, 2002-potent
Fellow, North American Academy of Arts and Sciences, 2002-potent
UCAR Champion of Science Award, 2002
Who’s Who of Professional Management, 2003-potent
Who’s Who Executive and Professional Registry, 2003-potent
Empire Who’s Who, 2003-potent
Strathmore’s Who’s Who, 2003-potent
2003 UCAR Science Advocate of the Year
University of Illinois Alumni Discretionary Award to Faculty, 2003
Faculty Fellow, National Center for Supercomputing Applications, 2003-2007
Who’s Who Among America’s Teachers, 2003-potent
United’s Who’s Who, 2004-potent
Manchester’s Who’s Who, 2004-potent
2005 Stratospheric Ozone Protection Award, U.S. Environmental Protection Agency
2005 UCAR Science Advocate of the Year Award
2006 NASA Honor Group Achievement Award
2006 UCAR Science Advocate of the Year Award
List of Teachers Ranked as Excellent, UIUC, 2005, 2007
2007 NASA Group Achievement Award as member of the Upper Atmosphere Research Satellite science team
2007 UCAR Science Advocate of the Year Award
2007 Nobel Peace Prize, shared based on work with Intergovernmental Panel on Climate Change (lead author on several international assessments)
Fellow, American Association for the Advancement of Science (named in October 2007)
Director of Communications (elected office), International Ozone Commission, 2008-potent
Member (Elected by academia peers), Board of Trustees, University Corporation for Atmospheric Research, 2008-present
Fellow, American Geophysical Union (named in January 2009)
Paul Harris Fellow, Rotary International, 2010-present

Professional Employment
1970–1972
Research Assistant, University of Illinois, Urbana
1972–1973
Atmospheric Scientist, Aeronomy Lab., National Oceanic and Atmospheric Administration, Boulder, CO
1973–1994
Atmospheric Scientist, University of California, Lawrence Livermore National Laboratory, Livermore, CA
1987–1994
Group Leader, Global Radiation, Chemical, and Dynamical Interactions, University of California, Lawrence Livermore National Laboratory, Livermore CA
1994-present
Professor, Department of Atmospheric Sciences, University of Illinois, Urbana, IL
1996-1999
Director, The Environmental Council, University of Illinois, Urbana, IL
Head, Department of Atmospheric Sciences, University of Illinois, Urbana, IL
2006-2008
Executive Coordinator/ Director, School of Earth, Society, and Environment, University of Illinois, Urbana, IL
2009-present
Harry E. Preble Professor of Atmospheric Sciences, University of Illinois, Urbana, IL

Professional Affiliations
Member, American Geophysical Union
Member, American Meteorological Society
Member, American Association for the Advancement of Science
Member, American Chemical Society
Member, Sigma Xi

Highlights of Professional Activities (past 5 years)
Member, Global Modeling Initiative, 1994-present
Member Representative, University Corporation for Atmospheric Research, 1994-present
Member, Advisory Board, Aspen Global Change Institute, 1997-present
Member, Computational Science and Engineering Program Steering Committee, University of Illinois, 1998-present

Member, Science Team, Biomass Burning and Lightning Emissions atmospheric measurement campaigns, sponsored by Japan, 2000-present

Member, International Ozone Commission, 2000-present

Member, Board on Oceans and Atmospheres, National Association of State Universities and Land-Grant Colleges, 1999-present.

Member, Executive Committee, Board on Oceans and Atmospheres, National Association of State Universities and Land-Grant Colleges, 2002-present.

Member, Executive Committee of Heads and Chairs, American Geophysical Union, 2003-2007.

Chair, Executive Committee of Heads and Chairs, American Geophysical Union, 2004-2007

Member, UCAR Membership Committee, 2003-2006

Member, AAAS Atmospheric and Hydrological Sciences Section, 2005-present

Chair, Workshop on Aviation Impacts on Climate, June 2006.

Member, UCAR Nominations Committee, 2006-2007

Member, AMS Committee of Judges of Undergraduate Awards, 2006-present

Chair, Review Committee, Environmental Sciences Division, Argonne National Laboratory, October, 2006.

Member, Organizing Committee, Symposium for 20th Anniversary of the Montreal Protocol, 2006-present

Member, Federal Aviation Administration’s Research Engineering and Development Advisory Committee, Energy and Environment Subcommittee, 2007-present

Chair, Committee of Visitors, review of Climate Change Research Program, Department of Energy, April 2007.

Chair, Climate Panel, ICIO CAEP Special Workshop, Montreal, October, 2007.


Member, Organizing Committee, 2008 Quadrennial Ozone Symposium, 2007-2008.

Article on my research in UCAR Highlights 2007

Member, Federal Advisory Committee, U.S. National Climate Assessment, 2008-2009

Faculty advisor, Technology and Management Program, UIUC, 2008-present

Member, UCAR Board of Trustees (elected October 2008)

Chair, AGU Global Environmental Change Focus Group, 2009-present

Member, UIUC Vice-Chancellor For Research, Energy Advisory Committee, 2009-present

Guest Editor, Journal of Great Lakes Research, 2009-2010

2009 Chancellor’s Lecture, University of Illinois, October 6, 2009

Member, American Geophysical Union Strategic Planning Task Force, 2009

Lead author, WMO-UNEP assessment on stratospheric ozone, 2009-2011
Editor-in-Chief, Insciences Journal on Climate Change, 2010-present
Invited lecture at the TEDxUIUC (special TED event), February 19, 2011
Keynote talk at Workshop on Interdisciplinary Research and Education, Helsinki, April 2011 (also had meeting with President of Finland).
Keynote talk at Climate Adaptation Workshop, Los Angeles, May 2011.
Testify, U.S. Senate, Committee on Appropriations, July 2011
Coordinating Lead Author, IPCC international climate assessment, 2010-present
Member, Federal Advisory Committee, U.S. National Climate Assessment, 2011-present
Member, Executive Secretariat, U.S. National Climate Assessment, 2011-present
Numerous interviews with newspapers, television and radio.