

SYMPOSIUM SPEAKER BIOGRAPHIES

Ashley A. Anderson
Town Hall about Climate Change
November 10, 3:30-5 p.m.

Ashley Anderson is an assistant professor in the Department of Journalism and Media Communication at Colorado State University. She conducts research in the area of science communication, with a focus on understanding how communication plays a role in public opinion and public engagement around controversial scientific topics such as climate change. Some of her recent work explores how communication around extreme weather events informs attitudes and engagement with climate change. She has also examined how the social context of online news, including social media platforms and reader comments, shapes audience perceptions. She completed a postdoctoral research fellowship with the Center for Climate Change Communication at George Mason University.



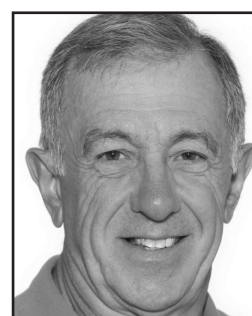
David Archer
Humanity and Global Warming: Views from the Carbon Cycle
November 10, 1:00-2:00 p.m.

David Archer is a professor in the Department of the Geophysical Sciences at the University of Chicago and a fellow of the American Geophysical Union, publishing on Earth's carbon cycle and its interaction with global climate. He has written a series of books on climate change, including *Global Warming: Understanding the Forecast*, a text for non-science major undergraduates now in its second edition, and *The Long Thaw: How Humans are Changing the Next 100,000 Years of Earth's Climate*. He teaches classes on global warming, environmental chemistry, and global biogeochemical cycles, and has created two free online climate science and modeling classes on Coursera.org.



Daniel Costa
Town Hall about Climate Change
November 10, 3:30-5:00 p.m.

Dan Costa, ScD, DABT is currently the National Program Director (NPD) for the Air Climate & Energy Research Program (ACE). Dan earned his BS in biology/chemistry from Providence College, Rhode Island, an MS in environmental sciences from Rutgers University, an MS and a ScD (doctor of science) in physiology/toxicology from the Harvard School of Public Health. He previously served as NPD for the Clean Air Research Program and was chief of the Pulmonary Toxicology Branch of the National Health and Environmental Research Laboratory (NHEERL) for 18 years, where he led an active group investigating the health effects of ozone, particulate matter as well as other air pollutants. He is a diplomat and past president of the American Board of Toxicology (1994) and is past president of the Inhalation Specialty Section of the Society of Toxicology (1996) from which he received the Career Achievement Award (2003). He has served on a number of



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national and international review committees involving grants and air quality issues. He has authored or co-authored more than 160 refereed publications, four book editorships, and over 30 book chapters, conference proceedings, and monographs. He maintains his involvement in research through collaborations with NHEERL investigators, mainly focusing on the role of lung-derived neurogenic modulation of cardiac function due to various stressors in animal models of cardiopulmonary disease. Dan is the father of five grown children and through them has had a continued role in sports and other activities. He is a high school basketball referee, plays basketball regularly, and coaches a Special Olympics basketball team. He carries these team principles to the workplace.

Barbara Finlayson-Pitts

The Past is Prologue: Lessons Learned for Science-Based Policies to Address Air Quality and Climate

November 10, 8:30–9:30 a.m.

Barbara Finlayson-Pitts is professor of chemistry at the University of California, Irvine, UCI Distinguished Professor, and director of AirUCI. Her research focuses on experimental studies of reactions that occur in the atmosphere, particularly those between gases and particles and/or thin films on surfaces. These include reactions that lead to particle formation and growth in air, or that increase toxicity such as atmospheric transformations of pesticides. She earned her undergraduate degree from Trent University in Canada, and her MS and PhD degrees at University of California, Riverside. She joined the faculty in the Department of Chemistry and Biochemistry at California State University, Fullerton in 1974, and in 1994 moved to University of California, Irvine. She is author or coauthor of more than 190 scientific publications and two books on atmospheric chemistry. Her research and teaching have been recognized by a number of honors and awards, including the 2004 American Chemistry Society Award for Creative Advances in Environmental Science & Technology, the 2017 Francis P. Garvan–John M. Olin Medal of the American Chemical Society, fellowships in the American Association for the Advancement of Science, the American Geophysical Union, the Royal Society of Chemistry, and election to the American Academy of Arts & Sciences and the National Academy of Sciences. She received the Coalition for Clean Air Carl Moyer Award for Scientific Leadership and Technical Excellence, the Haagen-Smit Clean Air Award from the California Air Resources Board, and was made an Honorary Lifetime Member of Iota Sigma Pi. She has mentored many students from undergraduates to graduate students, as well as postdoctoral fellows who have gone on to pursue a wide variety of careers.



C. Arden Pope III

Air Pollution and Health: Scientific and Public Policy Controversies

November 10, 10:30–11:30 a.m.

C. Arden Pope III is the Mary Lou Fulton Professor of Economics at Brigham Young University. He has conducted or collaborated on seminal studies on health effects of air pollution and has authored or coauthored approximately 200 research articles including papers



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in the *New England Journal of Medicine*, *JAMA*, *The Lancet*, *American Journal of Respiratory and Critical Care Medicine*, and *Circulation*. He is one of the world's most cited and recognized experts on health effects of air pollution and has served on and/or chaired various scientific advisory and oversight boards and committees, including the U.S. Environmental Protection Agency Science Advisory Board and the U.S. Environmental Protection Agency Advisory Council on Clean Air Compliance Analysis. He has a PhD from Iowa State University, was a fellow at the Harvard School of Public Health, and was an honorary fellow of the American College of Chest Physicians. He has been the recipient of multiple research and teaching awards, including the Thomas T. Mercer Joint Prize, American Association for Aerosol Research and International Society for Aerosols in Medicine; Maeser Distinguished Faculty Lecturer, BYU; and the Utah Governor's Medal for Science & Technology.

A. R. Ravishankara
The Ozone Hole: From Discovery to Recovery
November 10, 9:30–10:30 a.m.

A. R. Ravishankara is a professor in the Departments of Chemistry and Atmospheric Science at Colorado State University. He is the chair of the Board on Atmospheric Science and Climate of the National Academy of Sciences and a member of the Science Advisory Panel of the Climate Clean Air Coalition of United Nations Environment Programme. He has worked over the past three and a half decades on the chemistry of the Earth's atmosphere as it relates to stratospheric ozone depletion, climate change, and regional air quality. His measurements in the laboratory and in the atmosphere have contributed to deciphering the ozone layer depletion, including the ozone hole; to quantifying the role of chemically active species on climate; and to advancing understanding of the formation, removal, and properties of pollutants. He is an author or coauthor of 375 peer-reviewed publications. He is a member of the U.S. National Academy of Sciences, as well as a fellow of the American Geophysical Union, of the Royal Society of Chemistry, of the American Association for the Advancement of Science, and of the International Union of Pure and Applied Chemistry. His many awards include the Polanyi Medal of the Royal Society of Chemistry, the Stratospheric Ozone Protection award of the U.S. Environmental Protection Agency, the Silver Medal of the U.S. Department of Commerce, and the American Chemical Society's award for Creative Advances in Environmental Sciences. He was the co-chair of the World Meteorological Organization/United Nations Environment Programme Science Assessment Panel on Stratospheric Ozone from 2008 through 2015. He is on the editorial boards of *Proceedings of the National Academy of Sciences (PNAS)* and *Current Science*. He has previously served on many other editorial boards and was the editor of *Geophysical Research Letters*.



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Jeffrey Shaman

Simulation and Forecast of Infectious Disease: Environmental Determinants and Transmission Dynamics

November 10, 2:00–3:00 p.m.

Jeffrey Shaman is an associate professor in the Environmental Health Sciences department and co-director of the Climate and Health Program at Columbia University. He studies the survival, transmission, and ecology of infectious agents, including the effects of meteorological and hydrological conditions on these processes. Work-to-date has primarily focused on mosquito-borne and respiratory pathogens. He uses mathematical and statistical models to describe, understand, and forecast the transmission dynamics of these disease systems. Shaman is presently the principle investigator of multiple National Institutes of Health-, National Science Foundation- and Department of Defense-funded projects.



Adam Terando

Town Hall about Climate Change

November 10, 3:30–5:00 p.m.

Adam Terando is a research ecologist with the United States Geological Survey at the Southeast Climate Science Center, and an adjunct professor with the Applied Ecology Department at North Carolina State University. His current research focuses on the impacts of climate and land use change on ecosystems and the complex human–environment relationships that drive these processes. This includes understanding and predicting climatically-induced changes to extreme wildfires in the southeast United States; developing methods to quantify the information value of climate models for use in adaptive management problems; simulating urban growth and land use pattern changes in the southeast; exploring the feedbacks between climate, land use change, and coastal development; and developing ultra high-resolution climate projections for the U.S. Caribbean to support the creation of robust conservation reserves for at-risk species. Adam also serves as the federal coordinating lead author for the U.S. National Climate Assessment’s Southeast Chapter.



Program Update

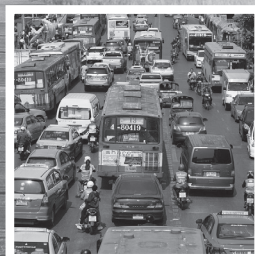
Symposium on Atmospheric Chemistry, Climate, and Health

November 10, 2017

Student Research Conference

November 11, 2017

Updated Schedules • Additional Speaker Biographies • Additional Research
Abstracts • Full Index of Student Presenters • Map of Poster Presentations



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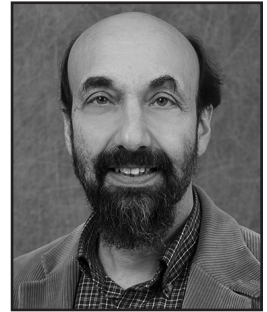
THE SCIENTIFIC RESEARCH HONOR SOCIETY

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Walter A. Robinson

**Screening and Scientific Critique of *An Inconvenient Sequel: Truth to Power*
November 10, 7:00–9:00 p.m.**

Walter A. Robinson is professor of atmospheric sciences in the Department of Marine, Earth, and Atmospheric Sciences at North Carolina State University. Walt was born in Brooklyn, New York, and grew up on Long Island and in Maryland. He received BS and MS degrees in physics from the University of Pennsylvania in 1977; then spent a year at McMurdo Station in the Antarctic where he ran the cosmic radiation laboratory. After some global travel, he returned to school in 1979, receiving his PhD in geological sciences, from Columbia University in 1985. Prior to joining the North Carolina State faculty in 2009, Walt was on the faculty of the University of Illinois Urbana-Champaign (1985–2006) and served for three years as a program director at the National Science Foundation. Robinson's research addresses the circulation of Earth's atmosphere and its implications for climatic variability and change. He is co-chief editor of the *Journal of the Atmospheric Sciences* and a fellow of the American Meteorological Society. He spent the fall of 2016 in Exeter, England, as visiting scientist at the United Kingdom Meteorological Office.



Brian Southwell

**Town Hall about Climate Change
November 10, 3:30–5:00 p.m.**

Brian Southwell is director of the Science in the Public Sphere Program in the Center for Communication Science at RTI International, an independent, nonprofit research institute based in Research Triangle Park, North Carolina. In addition, Brian is an adjunct professor with Duke University's Social Science Research Institute, where he teaches about social marketing and behavioral interventions. He also is a research professor of mass communication and an adjunct associate professor of health behavior at the University of North Carolina at Chapel Hill. His contributions appear in more than 100 journal articles and chapters and his various books, including *Social Networks and Popular Understanding of Science and Health* and *Misinformation and Mass Audiences* (available Fall 2017), highlight the contributions of social science to solutions for pressing societal concerns. Brian also is host of a public radio show, *The Measure of Everyday Life*, for WNCU 90.7 FM.

