Peter Adams

Professor and Department Head at Carnegie Mellon University

Pittsburgh, PA, US

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Biography

Peter Adams is the Thomas Lord Professor of Engineering, Department Head and Professor in the Department of Engineering & Public Policy and Professor in the Department of Civil and Environmental Engineering at Carnegie Mellon University. His research largely focuses on the development of chemical transport models and their application to decision-making, especially related to PM2.5. Adams also has extensive expertise in the simulation of aerosol microphysical processes, ultrafine particles and the formation of cloud condensation nuclei in global climate models. Areas of research have also included the effects of climate change on air quality, short-lived climate forcers, atmospheric ammonia and particulate matter formation from livestock operations, and the simulation organic particulate matter. Adams was selected for a Fulbright grant to collaborate with researchers at the Institute of Atmospheric Sciences and Climate in Bologna, has been a Visiting Senior Research Scientist at the National Aeronautics and Space Administration?s Goddard Space Flight Center, and received the Sheldon K. Friedlander Award for outstanding doctoral thesis from the American Association for Aerosol Research. He has previously served on the Commonwealth of Pennsylvania?s Air Quality Technical Advisory Committee and the Allegheny County Health Department?s Air Toxics New Guidelines Proposal Committee as well as service to the American Association for Aerosol Research. His research is supported primarily by the Environmental Protection Agency, the National Science Foundation, the National Aeronautics and Space Administration, the Department of Energy, and the Department of Defense. Adams received his BS degree in Chemical Engineering, summa cum laude, from Cornell University. He was awarded a Hertz Foundation Applied Science Fellowship for graduate study and received MS and PhD degrees in Chemical Engineering from the California Institute of Technology. He also holds an associated faculty position in the Chemical Engineering department at Carnegie Mellon.

Industry Expertise

Chemicals, Public Policy, Education/Learning, Research

Areas of Expertise

Air Quality, Aerosols, Regional Air Quality Modeling, Aerosol Effects on Climate, Atmospheric Particulate Matter, Atmospheric Chemistry

Affiliations

Air and Waste Management Association (AWMA): member, American Association for Aerosol Research (AAAR): member, past Internet Committee chair, By-Laws Committee, American Geophysical Union (AGU), American Society of Civil Engineers (ASCE), European Geosciences Union (EGU)

Event Appearances

Reduced-Complexity Models (RCMs) for Air Quality Impact Assessment: A Tutorial?
Community Modeling and Analysis System

An Introduction to Reduced-Complexity Models for Air Quality
18th Annual Community Modeling and Analysis (CMAS) Conference

Process-based ammonia emissions inventories from livestock: status and needs
National Atmospheric Deposition Program TDep Workshop

Bringing Air Quality Models into Policy and Systems Analysis
North Carolina State University

Bringing Air Quality Models into Policy and Systems Analysis
Clarkson University

Education

California Institute of Technology
M.S. Chemical Engineering

California Institute of Technology
Ph.D. Chemical Engineering

Cornell University
B.S. Chemical Engineering

Accomplishments

Lyman A. Ripperton Environmental Educator Award
2019

Carnegie Mellon University Teaching Innovation Award
2019

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