

Alan J. Cimorelli
SENIOR ADVISOR, ENVIROCOMP CONSULTING, INC.

EDUCATION:

BA (Physics) Temple University
MS (Environmental Science) Drexel University

PROFESSIONAL HISTORY:

2008 – 2014 Senior Physical Scientist, Environmental Assessment and Innovation Division, U.S. Environmental Protection Agency Region III
1984 - 2008 Lead Meteorologist, Air Protection Division, U.S. Environmental Protection Agency Region III
1998 - 1998 Adjunct Associate Professor, Dept. of Environmental Studies, Drexel University
1996 - 1996 Adjunct Associate Professor, Dept. of Environmental Studies, Drexel University
1994 - 1994 Adjunct Associate Professor, Dept. of Environmental Studies, Drexel University
1992 - 1992 Adjunct Associate Professor, Dept. of Physics and Atmospheric Science, Drexel University
1975 - 1987 Adjunct Assistant Professor, College of Engineering, Temple University
1978 - 1984 Regional Meteorologist, Air Resources Laboratory, Meteorology Division, National Oceanic and Atmospheric Administration
1974 - 1978 Environmental Scientist, Enforcement Division U.S. Environmental Protection Agency Region III
1972 - 1974 Research Assistant, Dept. of Physics and Atmospheric Science, Drexel University - Performed research related to Global Climate Change.
1970 - 1971 Research Assistant, Dept. of Physics, Temple University - Performed research in Superconductivity.
1970 - 1971 Teaching Assistant, taught undergraduate Physics recitations

AWARDS/COMMENDATIONS:

2006 Letter of Commendation from the Office of Air Quality Planning and Standards, EPA
2004 Superior Accomplishment Award, U.S. Environmental Protection Agency Region III
2004 Scientific and Technological Achievement Award - Office of Research Development, U.S. Environmental Protection Agency
2003 Bronze Medal, Office of Air and Radiation, U.S. Environmental Protection Agency
2003 Superior Accomplishment Award, U.S. Environmental Protection Agency Region III
2002 Superior Accomplishment Award, U.S. Environmental Protection Agency Region III
2001 Regional Science Achievement Award (first recipient), U.S. Environmental Protection Agency Region III
1999 Research Accomplishment of the Year Award, National Oceanic and Atmospheric Administration, Air Research Laboratories
1999 Bronze Medal, U.S. Environmental Protection Agency Region III
1999 Sustained Superior Performance Award, U.S. Environmental Protection Agency

- 1996 Special Act Award, U.S. Environmental Protection Agency Region III
- 1996 Bronze Medal, U.S. Environmental Protection Agency Region III
- 1994 Letter of Commendation, Deputy Administrator, U.S. Environmental Protection Agency
- 1994 Sustained Superior Performance Award, U.S. Environmental Protection Agency
- 1994 Letter of Commendation, State of Delaware
- 1994 Letter of Commendation, Deputy Administrator, U.S. Environmental Protection Agency
- 1993 Sustained Superior Performance Award, U.S. Environmental Protection Agency
- 1993 Bronze Medal, U.S. Environmental Protection Agency Region III
- 1992 Sustained Superior Performance Award, U.S. Environmental Protection Agency
- 1992 Letter of Commendation, U.S. Environmental Protection Agency's Panel on the Role of Science at EPA
- 1991 Sustained Superior Performance Award, US Environmental Protection Agency
- 1988 Letter of Commendation, Office of Research and Development, US Environmental Protection Agency Region III
- 1988 Letter of Commendation, City of Philadelphia
- 1987 Letter of Commendation, U.S. Environmental Protection Agency
- 1987 Letter of Commendation, U.S. Dept. of Justice
- 1987 Bronze Medal, U.S. Environmental Protection Agency, Region III
- 1986 Outstanding Performance Award, U.S. Environmental Protection Agency, Region III
- 1983 Outstanding Performance Award, National Oceanic and Atmospheric Administration
- 1981 Letter of Commendation, U.S. Environmental Protection Agency
- 1981 Bronze Medal, U.S. Environmental Protection Agency, Region III
- 1980 Special Achievement Award, U.S. Environmental Protection Agency Region III
- 1980 Letter of Commendation, U.S. Environmental Protection Agency
- 1977 Letter of Commendation, U.S. Environmental Protection Agency

MEMBERSHIP IN SCIENTIFIC ORGANIZATIONS:

- American Meteorological Society (prior to retirement)
- Air and Waste Management Association (prior to retirement)
- Sigma Phi Sigma, National Physics Honors Society

PROFESSIONAL APPOINTMENTS:

- 2006 – 2008
MEMBER, AERMOD Implementation Workgroup
- 2005 – 2006
CHAIRMAN & FOUNDER, AERMOD Implementation Workgroup
- 2003 - 2014
MEMBER, U. S. Environmental Protection Agency's Council for Environmental Regulatory Modeling - Purpose: Promote consistency and consensus among environmental model developers and users. Collaborate with National Academy of Sciences on integrating environmental models with regulatory decisions.
- 2001 - 2008
MEMBER, External Advisory Committee to Community Modeling and Analysis (CMAS) System Center, University of North Carolina, Carolina Environmental Program. CMAS

purpose: Development, application and analysis of atmospheric models by engaging the environmental modeling community to facilitate an open-source development and application of large scale atmospheric models.

1999 - 2002

MEMBER, American Meteorological Society (AMS) Committee on Meteorological Aspects of Air Pollution (CMAAP): Duties: To plan and ensure the quality of scientific conferences, prepare Statements on issues in the field, and provide advice to the AMS Council on related matters.

1993 - 1994

MEMBER, Agency Taskforce on Environmental Regulatory Modeling (ATFERM): Multi-disciplinary group formed by the Deputy Administrator of EPA in order to develop a consistent approach among all modeling activities within the agency.

1991 - 2014

MEMBER, Interagency Workgroup on Air Quality Modeling (IWAQM): Membership: EPA Office of Air Quality Planning and Standards, EPA Office of Research and Development, EPA Region III, National Park Service and National Forest Service. Develop national approach to long range transport modeling to evaluate acid deposition and visibility impairment in our National Parks and Wilderness areas.

1991 - 2014

MEMBER, AMS/EPA Model Improvement Committee (AERMIC): Cooperative effort between the AMS and the EPA for the purpose of upgrading EPA regulatory models to present state-of-the-science models.

1986 - 1993

CHAIRMAN, Technology Transfer Workgroup (TTW). Membership: EPA Regions I, II, III, IV & X, EPA Office of Air Quality Planning and Standards, EPA Office of Research and Development, the States of New York and Oregon. Purpose: Develop application/regulatory grade modeling techniques from basic research products.

1979 - 2002

MEMBER, Workgroup to Revise the Modeling Guidelines. Membership: EPA Office of Air Quality Planning and Standards, Office of Research and Development, and Region III. Purpose: Develop national agency guidance on air quality modeling.

1987 - 1989

MEMBER, Air Superfund Steering Committee. Membership: EPA Office of Air Quality Planning and Standards, Office of Hazardous Waste Programs and Region III. Purpose: Develop national guidance on conducting air pathway analyses at superfund sites.

1987 - 1989

MEMBER, Valley Stagnation Workgroup. Membership: EPA Office of Air Quality Planning and Standards, Regions X, VIII & III. Purpose: Develop agency guidance regarding prediction of concentration during valley stagnation.

1980 - 1980

CHAIRMAN, Complex Terrain Modeling Group. Membership: EPA Office of Air Quality Planning and Standards, Office of Research and Development, Regions I, III, VIII

PUBLICATIONS:

Cimorelli, A. J. and Stahl, C.H. (2014): "Avoiding Proofiness": Addressing Uncertainty in Environmental Characterization, *Integrated Environmental Assessment and Management*.

10(1):141-142.

- Stahl, C.H. and Cimorelli, A.J. (2012): A Demonstration of the Necessity and Feasibility of Using a Clumsy Decision Analytic approach on Wicked Environmental Problems, *Integrated environmental assessment and management*. 9:17-30.
- Stahl, C.H., Cimorelli, A.J., Mazzarella, C., Jenkins, B. (2011): Toward Sustainability: A Case Study Demonstrating Trans-Disciplinary Learning through the Selection and Use of Indicators in a Decision Making Process. *Integrated Environmental Assessment and Management*. 7:483-498.
- Luecken, D.J. and Cimorelli, A.J. (2008): Codependences of Reactive Air Toxic and Criteria Pollutants on Emission Reductions, *Journal of Air & Waste Management*. 58:693-701.
- Venkatram, A. and Cimorelli, A.J. (2007): On the role of nighttime meteorology in modeling dispersion of near surface emissions in urban areas, *Atmospheric Environment*. 41:692-704.
- Cimorelli, A. J., Stahl, C. H. (2006): Philadelphia air toxics study: Evaluation of risk management options using MIRA, (invited paper). *Air and Waste Management Association's Integrated Control Strategies: Achieving Greater Benefit, November 16-17, 2006*, Durham, NC
- Touma, J. S., Isakov, V., Cimorelli, A. J., Anderson, B., Brode, R.W. (2007): Using Prognostic Model Generated Meteorological Data in the AERMOD Dispersion Model, *Journal of the Air & Waste Management Ass.* 57(5): 586-95.
- Cimorelli, A. J., Perry, S.G., Venkatram, A., Weil, J.C., Paine, R.J., Wilson, R.B., Lee, R.S., Peters, W.D., Brode, R.W., (2005): AERMOD: A Dispersion Model for Industrial Source Applications Part I: General Model Formulation and Boundary Layer Characterization, *J.Appl. Meteor.* 44(5): 682-693.
- Perry, S. G., Cimorelli, A. J., Paine, R.J., Brode, R.W., Weil, J. C., Venkatram, A., Wilson, R.B., Lee, R.S., Peters, W.D., (2005): AERMOD: A Dispersion Model for Industrial Source Applications Part II: Model Performance Against Seventeen Field-Study Databases, *J.Appl. Meteor.* 44(5): 694-708.
- Stahl, C. H., Cimorelli, A.J. (2005): How Much Uncertainty is Too Much and How Do We Know? A Case Example of the Assessment of Ozone Monitor Network Options, *Risk Analysis* 25(5): 1109-1120.
- Cimorelli, A. J., Stahl, C. H., (2005) *Tackling the Delemma of the Science-Policy Interface in Environmental Policy Analysis, Bulletin of Science, Technology & Society*, 25, 46-52.
- Cimorelli, A. J., Perry, S.G., Venkatram, A., Weil, J.C., Paine, R.J., Wilson, R.B., Lee, R.S., Peters, W.D., Brode, R.W., Paumier, J.O., (September, 2004), *AERMOD: Description of Model Formulation*, EPA-454/R-03-004, U.S. Environmental Protection Agency, RTP, NC.
- Stahl, C.H., Fernandez, C., Cimorelli, A.J. (2004): Technical Support Document for the Region III 8-Hour Ozone Designations 11-Factor Analysis, *USEPA*, Philadelphia, PA.
- Holland, D. M., Cox, W. M., Scheffe, R., Cimorelli, A. J., Nychka, D., Hopke, P.K., (August, 2003) Spatial Prediction of Air Quality Data, *EM: Air & Waste Management Association*, 31-35.
- Stahl, C. H., Cimorelli, A. J., Chow, A. H., A (2002) New Approach to Environmental Decision Making: Multi-Criteria Integrated Resource Assessment (MIRA), *Bulletin of Science, Technology & Society*, 22(6), 443-459.
- Venkatram, A., R. Brode, A. J. Cimorelli, R. Lee, R. Paine, S. Perry, W. Peters, J. Weil, R. Wilson (2001), A Complex Terrain Dispersion Model for Regulatory Applications, *Atm.*

Enviro., 35: 4211-4221.

- Peters, W. D., Paine, R. J., Lee, R. F., Wilson, R. B., Cimorelli, A. J., Perry, S. G., Weil, J. C., Venkatram, A., (1999) *Comparison of Regulatory Design Concentrations: AERMOD versus ISCST3 and CTDMPLUS, AERMIC.*
- Cimorelli, A. J., Stahl, C. H., Chow, A. H., and Fernandez, C., (1999) Decision Consequence Model (DCM): Integrating environmental data and analysis into real time decision making. 99-741. *Air and Waste Management Association. Proceedings 92nd Annual Meeting Air and Waste Management Association*, Pittsburgh, PA.
- Peterson, S. L., Cimorelli, A. J., and Chow, A. H. Integrating Mobile Source Emissions Data Into Real-Time Decision Making (1999) *Air and Waste Management Association. USEPA and AWMA Emissions Inventory Workshop*, Pittsburg, PA,
- Paine, R. J, Lee, R. F., Brode, R. W, Wilson, R. B., Cimorelli, A. J., Perry, S. G., Weil, J. C., Venkatram, A., and Peters, W. D., (1999) AERMOD: Model formulation and evaluation results. 99-476. *Air and Waste Management Association. Proceedings 92nd Annual Meeting Air and Waste Management Association*, Pittsburgh, PA.
- Stahl, C. H., Kim, H. J., Cimorelli, A. J., Chow, A. H., (1999) Decision Consequence Model (DCM): Integrating Environmental, Social, Political and Economic Impact Assessment into Real-Time Decision Making, *Proceedings of the 19th Annual Meeting of the International Association for Impact Assessment*, Glasgow, Scotland.
- Lee, R. F., Paine, R. J, Perry, S. G., Cimorelli, A. J., Weil, J. C., Venkatram, A., and Wilson, R. B., (1998) Developmental Evaluation of the AERMOD Dispersion Model, Boston, American Meteorological Society. Tenth Joint AMS/AWMA Conference on Application of Air Pollution Meteorology. 98.
- Paine, R. J, J.T. Lee Brode, R. W, Wilson, R. B., Cimorelli, A. J., Perry, S. G., Weil, J. C., Venkatram, A., and Peters, W. D., (December 17, 1998) *Model Evaluation Results for AERMOD, AERMIC* .
- Cimorelli, A. J., Perry, S. G., Lee, R. F., Paine, R. J, Venkatram, A., Weil, J. C., and Wilson, R. (1996) B. Current Progress in the AERMIC Model Development Program. 96-TP24B.04. *Air and Waste Management Association. Proceedings 89th Annual Meeting Air and Waste Management Association*, Pittsburg, PA,
- Lee, R. F., Perry, S. G., Cimorelli, A. J., Paine, R. J, Venkatram, A., Weil, J. C., and Wilson, R. B., (1995) AERMOD - the developmental evaluation, Baltimore, MD, U.S.A. *Preprints of the Twenty-First NATO/CCMS International Technical Meeting on Air Pollution Modeling and Its Application.*
- Perry, S. G., Cimorelli, A. J., Lee, R. F., Paine, R. J, Venkatram, A., Weil, J. C., and Wilson, R. B., (1994) AERMOD: A dispersion model for industrial source applications. 94-TA23.04. *Air and Waste Management Association. Proceedings 87th Annual Meeting Air and Waste Management Association*, Pittsburgh, PA,
- Firestone, M., A.J. Cimorelli, (1994) Guidance For Conducting External Peer Review of Environmental Regulatory Models, EPA 100-b-94-001, *USEPA Office of the Administrator.*
- Burns, D. J., Perry, S. G., and Cimorelli, A. J., (1991) An advanced screening model for complex terrain applications, American Meteorological Society. *Proceedings of the 7th Joint Conference on Applications of Air Pollution Meteorology with AWMA. 91*, Boston, MA,
- Cimorelli, A. J., (1991) Visibility and deposition Impacts on the Shenandoah National Park and the James River Face from Power Generators Proposing to Locate in the Commonwealth of

- Virginia, *USEPA Region III*.
- Cimorelli, A. J. (1990), Traverse-monitoring for superfund sites, Air and Waste Management Association. *EPA/AWMA International Symposium, Measurement of Toxics and Related Air Pollutants*, Pittsburgh, PA.
- Perry, S. G., D.J. Burns, Cimorelli, A. J., (1990) User's Guide to CTDMPLUS: Volume 2. The Screening Mode (CTSCREEN), EPA 600/8-90-087, *Atmospheric Research and Exposure Assessment Laboratory, ORD, USEPA*.
- Garrison, M. E. and Cimorelli, A. J., (1989) Procedures for conducting air pathway analyses at superfund sites. 89-142.4. *1989 Air and Waste Management Association. Proceedings 82th Annual Air and Waste Management Association*, Pittsburgh, PA
- Cimorelli, A. J., (1988) Ambient Air Concentration Predictions for Dioxin and Cadmium from the Philadelphia Northwest Incinerator, *USEPA Region III*.
- Cimorelli, A. J., (1987) Raymark Superfund Site - TCE Exposure Assessment, *USEPA Region III*.
- Cimorelli, A. J., (1987) Evaluation of Ambient Mercury Vapor Concentrations in the Vicinity of the Former Olin-Mathessen Chlor-Alkali Plant, Saltville, Virginia, *USEPA Region III*.
- Belanger, W. E. and Cimorelli, A. J., (1987) Role of emergency response modeling: Expectations, methodologies and realism. 87-102.3. 1986. Pittsburgh, PA, Air Pollution Control Association. Proceedings 80th Annual Meeting Air Pollution Control Association.
- Cimorelli, A. J., (1986) Ambient Air Concentration Predictions for Dioxin and Cadmium from the Philadelphia Northwest Incinerator, *USEPA Region III*.
- Cimorelli, A. J., (1986) Atmospheric Deposition Analysis of Cadmium, Zinc, Lead and Copper in the Vicinity of the New Jersey Zinc Palmerton Facility, *USEPA Region III*.
- Rudy, F. R., Bates, R. D., Cimorelli, A. J., Hill, G. S., Engelman, K., (1980) Adrenal Medullary Hyperplasia: A clinicopathologic study of four cases, *Human Pathology*, 11: 650-657.
- Cimorelli, A. J. and House, F. B. (1974) Our Contaminated Atmosphere – The Danger of Climate Change, *Department of Physics and Atmospheric Science, Drexel University, Prepared under NASA Contract No. NAS1-11871*.