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Education

University of Illinois, Department of Civil Engineering — Urbana, IL

- PhD Environmental Engineering 1996
- MS Environmental Engineering 1991

California Institute of Technology — Pasadena, CA

- BS Chemical Engineering 1989

Experience

1999–present NOAA/GMD and University of Colorado Boulder, CO

CIRES Research Scientist

- Data analysis of aerosol optical data related to climate change, long term trends in aerosol properties, aerosol transport and for global model evaluation
- Presentation of results in peer-reviewed journals and scientific conferences
- Supervision/mentoring of students doing aerosol research
- Laboratory and field maintenance of aerosol monitoring instruments
- Computer programming for data analysis and web-based instrument monitoring

1999-2000 CIRES Outreach Boulder, CO

CIRES Research Scientist

- Studied involvement and retention of scientists in outreach programs
- Supervised graduate students doing outreach research
- Participated in CIRES Earthworks for K-12 teachers course

1998-1999 University of Northern Colorado Greeley, CO

NSF PFSMETE Post-doc

- Studied factors influencing high school student interest in science
- Taught 'Introduction to environmental science' undergraduate elective
- Taught 'Air pollution and statistics' course to Upward Bound students.

1997-1998 Electric Power Research Institute Palo Alto, CA

Consultant

- Analyzed aerosol chemical, optical and gravimetric data from SEAVS field program

1996-1997 Colorado State University Fort Collins, CO

CIRA Post-doc

- Intercomparison of cloud droplet monitoring techniques
- Studied cloud-aerosol interactions

Awards

2009 Haagen-Smit Award for outstanding paper
2016 CIRES Technology Transfer Award for CLAP development
2014 CIRES Silver Medal Award for establishment of NOAA Network

Publications

In progress

Andrews, E., Schmeisser, L., Ogren, J.A., et al., "Comparison of Aerosol Optical Property Climatology Between In-situ Surface Measurements and Model Simulations," for submission to *Atmos. Chem. Phys.*

Andrews, E., McClure, A., Burgos, M., Sheridan, P.J., et al., "Climatology of aerosol properties and surface ozone at a coastal monitoring site in northern California," for submission to *AAQR*

Andrews, E., Burgos, M., Titos, G., Zieger, P., "What is dry?" for submission to *Geophys. Res. Lett.*

Burgos, M., Zieger, P., Titos, G, Andrews, E., Alados-Arboledas, L., Baltesperger, U., Day, D., Fierz-Schmidhauser, R., Jefferson, A., Kalivitis, N., Kouvarakis, G., Mihalopoulis, N., Sun., J., Weingartner, E., "Data Descriptor: A global view on the effect of water uptake on aerosol particle light scattering," for submission to *Scientific Data*

Petersen, R.C., Hallar, A.G., McCubbin, I.B., Ogren, J.A., Andrews, E., Lowenthal, D., Novosselov, I., Gorder, R., Purcell, R., Sleeth, D., "Experimental study of turbulent flow inlet system performance," for submission to *Aerosol Sci. Technol.*.

Sorribas, M., Andrews, E., Ogren, J.A., del Águila, A., Fraile, R., Sheridan, P. and Yela, M., "Climatological study for understanding the aerosol radiative properties on the southwestern coast of Europe," for submission to *Atmos. Res.*

Submitted/In Review

Jpangie-Green, C., Andrews, E., McCubbin, I.B., Ogren, J., Hallar, A.G., "Climatology of aerosol optical properties at Storm Peak Laboratory," submitted to AAQR, June, 2018.

Rivera, H., Ogren, J.A., Andrews, E., Mayol-Bracero, O., "Variations in the physicochemical and optical properties of natural aerosols in Puerto Rico - Implications for climate," Atmos. Chem. Phys. Disc., https://doi.org/10.5194/acp-2018-791, 2018.

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Andrews, E., Sheridan, P., Ogren, J.A., Hageman, D., Jefferson, A., Wendell, J., Alastuey, A., Alados-Arboledas, L., Bergin, M., Ealo, M., Hallar, A.G., Hoffer, A., Kalapov, I., Keywood, M., Kim, J., Kim, S.-W., Kolonjari, F., Labuschagne, C., Lin, N.-H., Macdonald, A., Mayol-Bracero, O.L., McCubbin, I.B., Pandolfi, M., Reisen, F., Sharma, S., Sherman, J. P., Sorribas, M., Sun, J., "Overview of the NOAA/ESRL Federated Aerosol Network" *Bull. Amer. Meteor. Soc.*, accepted 2018.

Collaud Coen, M., Andrews, E., Aliaga, D., Andrade, M., Angelov, H., Bukowiecki, N., Ealo, M., Fiahlo, P., Flentje, H., Hallar, A.G., Hooda, R., Kalapov, I., Krecji, R., Lin, N.H., Marinoni, A., Ming, J., Nguyen, N. A., Pandolfi, M., Pont, V., Ries, L., Rodriguez, S., Schauer, G., Sellegri, K., Sharma, S., Sun, J., Tunved, P., Velasquez, P., Ruffieux, D., "Identification of topographic features influencing aerosol observations at high altitude stations," Atmos. Chem. Phys., 18, 12289-12313, doi:/10.5194/acp-18-12289-2018, 2018.

Mason, B., Wagner, W.L., Adler, G., Andrews, E., Brock, C.A., Gordon, T.D., Lack, D.A., Perring, A.E., Richardson, M.S., Schwarz, J. P., Ziemba, L.D., Murphy, D.M., "An intercomparison of absorption measurements conducted during the SEAC4RS campaign," Aerosol. Sci. Technol., https://doi.org/10.1080/02786826.2018.1500012, accepted 2018.

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Schmeisser, L., Backman, J., Ogren, J.A., Andrews, E., Asmi, E., Starkweather, S., Fiebig, M., Sharma, S., Eleftheriades, K., Uttal, T., Bergin, M., Tunved, P., Jefferson, A., "Seasonality of aerosol optical properties in the Arctic," *Atmos. Chem. Phys.,* 18, 11599-11622, doi:10.5194/acp-18-11599-2018, 2018.

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2017

Andrews, E., Ogren, J.A., Kinne, S., Samset, B., "Comparison of AOD, AAOD and column single scattering albedo from AERONET retrievals and in situ profiling measurements," *Atmos. Chem. Phys.*, 17, 6041-6072, http://www.atmos-chem-phys.net/17/6041/2017/, 2017.

Ogren, J.A., Wendell, J., Andrews, E., Sheridan, P., “Continuous light absorption photometer for long-term studies,” Atmos. Meas. Tech. Disc., https://doi.org/10.5194/amt-2017-212, accepted, 2017.

Schmeisser, L., Andrews, E., Ogren, J.A., et al., “Classifying aerosol type using in-situ surface spectral aerosol optical properties,” *Atmos. Chem. Phys.*, 17, 12097-12120, https://doi.org/10.5194/acp-17-12097-2017, 2017.

Sorribas, M., Adame, J.A., Andrews, E., and Yela, M., “An anomalous African dust event and its impact on aerosol radiative forcing on the Southwest Atlantic coast of Europe in February 2016,” *Sci. Tot. Environ.,583, 269-279,* http://dx.doi.org/10.1016/j.scitotenv.2017.01.064, 2017.

2016

Denjean, C., Formenti, P., Desboeufs, K., Chevaillier, S., Triquet, S., Maille, M., Cazaunau, M, Laurent, B., Mayol-Bracero, O.L., Vallejo, P., Quinones, M., Gutierrez-Molina, I.E., Cassola, F., Prati, P., Andrews, E., Ogren, J., “Size distribution and optical properties of African mineral dust after intercontinental transport,” *J. Geophys. Res.*, 121, 7117–7138, doi:10.1002/2016JD024783, 2016.

Hallar, A.G., Andrews, E., Bukowiecki, N., Jaffe, D.A., Lin, N.-H*.,* “Overview of the Special Issue “Selected Papers from the 2nd Atmospheric Chemistry and Physics at Mountain Sites Symposium””, *AAQR,* 16, 471-477, 2016.

Hallar, A.G., Petersen, R., McCubbin, I.B., Lowenthal, D., Lee, S., Andrews, E., Yu, F., “Climatology of new particle formation and corresponding precursors at Storm Peak Laboratory,” *AAQR*, 16, 816-826, 2016.

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Hallar, A. G., Petersen, R., Andrews, E., Michalsky, J., McCubbin, I.B., Ogren, J., “Contributions of Dust and Biomass-burning to Aerosols at a Colorado Mountain-top Site,” *Atmos. Chem. Phys, 13665-13679,* 2015.

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