

**Dr. Andrew A. May**  
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### Education

- *Ph.D., Mechanical Engineering*, Carnegie Mellon University, Pittsburgh, PA (August 2012)
  - Dissertation: Quantifying Gas-Particle Partitioning of Primary Organic Aerosol from Combustion Systems
- *M.S., Civil & Environmental Engineering*, Clarkson University, Potsdam, NY (May 2009)
  - Thesis: Characterization of a Novel Large Particle Sampler
- *B.Ch.E., Chemical Engineering*, University of Delaware, Newark, DE (May 2007)

### Professional experience

- *Associate professor*, Department of Civil, Environmental and Geodetic Engineering, The Ohio State University, May 2022-present
- *Assistant professor*, Department of Civil, Environmental and Geodetic Engineering, The Ohio State University, September 2015-May 2022
- *Affiliated faculty*, Sustainability Institute, The Ohio State University, April 2019-present
- *Affiliated faculty*, Environmental Science Graduate Program, The Ohio State University, September 2015-present
- *Senior research associate*, Department of Civil, Environmental, and Geodetic Engineering, The Ohio State University, August 2014-August 2015
- *Post-doctoral scholar*, Department of Atmospheric Science, Colorado State University, June 2013-July 2014
- *Post-doctoral scholar*, Department of Mechanical Engineering, Carnegie Mellon University, January 2013-May 2013
- *Research associate*, Department of Mechanical Engineering, Carnegie Mellon University, August 2012-December 2012

### Research Interests

- Aerosol-climate-cloud interactions
- Atmospheric fate and transport of per- and poly-fluorinated alkyl substances (PFAS)
- Public exposure to air pollution

### Teaching Experience

- CBE 5771: Air Pollution (AU18)
- CIVILEN 3130: Fluid Mechanics (AU16, SP17, SP18, AU19, SP21, SP22)
- ENVENG 4400/6400: Environmental Chemical Fate and Transport (SP21, SP22)
- ENVENG 5140: Air Quality Engineering (SP16, SP17, SP18, SP19, SP20, AU20, AU21, AU22)

### Mentoring Experience

#### Current:

- PhD Students
  - Mohammed Ahmed, OSU CEGE: August 2021-present
- MS Students
  - Zach Dichtl, OSU CRP/CEGE: December 2021-present

### Previous:

- PhD Students: Hanyang Li, Yangyang Zou
- Master's Students: Ziyang Lei, Johnson Luma, Miranda McGrothers, Anjelica Moreno
- Undergraduate Theses: David Kormos, Alexandra Ng, Sara Quinlin, Emma van Dommelen
- Undergraduate Non-thesis: Dema Alkashkish, Olivia Ambuehl, Ehsan Ali, Simon Bartos, Hrithik Basu, Bailey Burdue, Alexander Hoet, Sachinda Liyanaarachchi, Bennett Wildey, Di Xu
- Summer Undergraduate Research: Gustavo Acra de Oliveira, Abigail Kaye, Anshuman Mishra
- High School Interns: Matthew Frastaci, Andrew Golden, Cyrus Lloyd, Joshua Remeis, Katie Wu

### **Awards and Honors**

- Engineer-in-training, State of Delaware (2006)
- OSU College of Engineering Inclusive Excellence Certificate (2020, 2021, 2022)
- OSU College of Engineering Lumley Research Award (2021)
- OSU Drake Institute for Teaching and Learning Research Mentor Training (2021)

### **Service to National Organizations**

# indicates elected/appointed positions

- American Association of Aerosol Research: 2007-present
  - Atmospheric Aerosols Working Group Chair#: 2019-2020
  - History of Aerosol Science Working Group Chair#: 2022-2023
  - Co-organizer of a special symposium on biomass burning#: 2019
- American Society for Engineering Education: 2017-present
- Association of Environmental Engineering and Science Professors: 2014-present

### **Service to Regional Organizations**

# indicates elected/appointed positions

- Mid-Ohio Regional Planning Committee, Energy and Air Quality Working Group: 2014-present
  - Vice chair#: 2016-2018
- Ohio Transportation Engineering Conference, Environmental Sub-Committee Co-Chair#: 2016-2018

### **Other External Service Activity**

- Peer-review for scientific journals
  - *Aerosol Science & Technology*
  - *Atmospheric Chemistry & Physics*
  - *Atmospheric Environment*
  - *Environmental Science & Technology*
  - *Environmental Science & Technology Letters*
  - *Geophysical Model Development*
  - *Geophysical Research Letters*
  - *Fire*
  - *Journal of Aerosol Science*
  - *Journal of Geophysical Research – Atmospheres*
  - *Science of the Total Environment*
- Editorial board for *Applied Sciences* (journal), Environmental and Sustainable Science and Technology section
- Federal proposal reviewer
  - Department of Energy Earth and Environmental Systems Urban Integrated Field Laboratories: 2022 (virtual panel)
  - National Oceanic and Atmospheric Administration Atmospheric Chemistry, Climate, and Carbon Cycle: 2019 (ad hoc)
  - National Science Foundation Environmental Engineering: 2017 (in-person panel)

- National Science Foundation Computational and Data-Enabled Science and Engineering: 2017 (ad hoc)
- Session moderator at academic conferences (AAAR, AEESP)

### Internal Service Activity

- OSU CEGE Mentoring Committee: 2015-2018
- OSU CEGE Undergraduate Studies Committee: 2017-present
- OSU CEGE Undergraduate Curriculum Renewal Committee: 2020-present
- OSU Engineering Undergraduate Honors Committee: 2017-2022
- OSU Engineering Core Curriculum Committee: 2020-present
  - Committee Chair: 2022-present
- OSU Sustainability Institute, Health Buildings Exploratory Research Group Co-Lead: 2021-present

### Peer-Reviewed Publications (since 2018)

\*Indicates trainees working under my supervision

Google Scholar profile: <https://scholar.google.com/citations?user=e3APW-sAAAAJ&hl=en>

- 1) Li, H.\*; May, A.A. “Estimating mass-absorption cross section of ambient black carbon aerosols: theoretical, empirical, and machine learning models.” *Aerosol Sci. Technol.* Accepted.
- 2) Castner, J; Huntington-Moskos, L.G.; May, A.A. “Generating Data Visualizations of Longitudinal Cohort Ambient Air Pollution Exposure: Report Back Intervention Development in Participatory Action Research.” *CIN – Computers, Informatics, Nursing.* 40 (2022): 44-52.
- 3) Zou, Y.\*; Clark, J.D.; May, A.A. “Laboratory evaluation of the effects of particle size and composition on the performance of integrated devices containing Plantower particle sensors.” *Aerosol Sci. Technol.* 55 (2021): 848-858.
- 4) Roostaei, J.; Colley, S.; Mulhern, R.; May, A.A.; Gibson, J.M.D. “Predicting the risk of GenX contamination in private well water using a machine-learned Bayesian network model.” *J. Hazard. Mat.* 411 (2021): 125075.
- 5) Zou, Y.\*; Clark, J.D.; May, A.A. “A systematic investigation on the effects of temperature and relative humidity on the performance of eight low-cost particle sensors and devices.” *J. Aerosol Sci.* 152 (2020): 152 (2020): 105715.
- 6) Hyder, A.; May, A.A. “Translational data analytics in exposure science and environmental health: a citizen science approach with high school students.” *Environ. Health.* 19 (2020): 1-12
- 7) Li, H.\*; May, A.A. “An exploratory approach using regression and machine learning in the analysis of mass absorption cross section of black carbon aerosols: model development and evaluation.” *Atmosphere.* 11 (2020): 1185.
- 8) Galloway, J.E.; Moreno, A.V.P.\*; Lindstrom, A.B.; Strynar, M.J.; Newton, S.; May, A.A.; Weavers, L.K. “Evidence of Air Dispersion: HFPO-DA and PFOA in Ohio and West Virginia Surface Water and Soil near a Fluoropolymer Production Facility.” *Environ. Sci. Technol.* 54 (2020): 7175-7184.
- 9) Li, H.\*; McMeeking, G.R.; May, A.A. “Development of a new correction algorithm applicable to any filter-based absorption photometer.” *Atmos. Meas. Tech.* (2020): 2865-2886.
- 10) Li, X.; Dallmann, T.R.; May, A.A.; Presto, A.A. “Seasonal and Long-Term Trend of On-Road Gasoline and Diesel Vehicle Emission Factors Measured in Traffic Tunnels.” *Applied Sciences.* 10 (2020): 2458.
- 11) Haines, S.R.. et al. “Ten questions concerning the implications of carpet on indoor chemistry and microbiology.” *Building and Environment.* 170 (2020): 106589.
- 12) Zou, Y.\*; Young, M.; Chen, J.; Liu, J.; May, A.A.; Clark, J.D. “Examining the functional range of commercially available low-cost airborne particle sensors and consequences for monitoring of indoor air quality in residences.” *Indoor Air.* 30 (2020): 213-234.
- 13) Zou, Y.\*; Young, M.; Wickey, M.; May, A.A.; Clark, J.D. “Response of eight low-cost particle sensors and consumer devices to typical indoor emission events in a real home (ASHRAE 1756-RP).” *Sci. Technol. Built Environ.* 26 (2019): 237-249.

- 14) Li, H.\*; Lamb, K.D.; Schwarz, J.P.; Selimovic, V.; Yokelson, R.J.; McMeeking, G.R.; May, A.A. “Inter-comparison of black carbon measurement methods for simulated open biomass burning emissions.” *Atmos. Environ.* 206 (2019): 156-169.

**Professional Presentations (as presenting author since 2018)**

*Platform presentations italicized*

Invited talks underlined

- 1) American Association for Aerosol Research Virtual Lecture Series, “Laboratory evaluation of the effects of particle size and composition on the performance of integrated devices containing Plantower particle sensors.” Online, July 2022.
- 2) University of Florida, Graduate Environmental Engineering Seminar, “Improved Estimation of Black Carbon Light Absorption and Mass Concentrations from Filter-Based Absorption Photometers.” Online, October 2021.
- 3) Air Sensors International Conference – Ventilation and Health Effects, “Evaluation of Low-Cost Particle Sensors for Use in Indoor Air Quality Monitoring and Smart Building Systems”. Online webinar, March 2021.
- 4) Ashland University Biennial Symposium against Indifference, “Using Low-Cost Sensors to Improve the Spatial Coverage of Air Quality Measurements.” Ashland, OH, January 2020.
- 5) American Association for Aerosol Research Annual Conference, “A Meta-Analysis of Black Carbon Emissions from Fire-Prone Ecosystems in the United States.” Portland, OR, October 2019.
- 6) American Association for Aerosol Research Annual Conference, “Modeling Water Uptake by Dust in Residential Environment.” Portland, OR, October 2019.
- 7) American Association for Aerosol Research Annual Conference, “Estimating Volatility Distributions of Primary Organic Aerosols Using Artifact-Corrected Quartz Filters.” Portland, OR, October 2019.
- 8) University of Colorado at Boulder, Environmental Engineering Graduate Program, “An inter-comparison of measurement techniques for black carbon: application to biomass burning smoke.” Boulder, CO, September 2019.
- 9) Association of Environmental Engineering and Science Professors Bi-annual Research and Education Conference, “Atmospheric Transport of Perfluorinated Alkyl Substances from Chemours Facilities using CALPUFF View.” Tempe, AZ, May 2019.
- 10) Georgia Institute of Technology, Departments of Earth and Atmospheric Science, Chemical and Biomolecular Engineering, and Civil and Environmental Engineering, “An inter-comparison of measurement techniques for black carbon: application to biomass burning smoke.” Atlanta, GA, January 2019.