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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

- *Assistant professor*, Department of Civil, Environmental and Geodetic Engineering, The Ohio State University, September 2015-present
- *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

- Atmospheric chemistry
- Combustion emissions and atmospheric impacts
- Public exposure to air pollution

Teaching Experience

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

Mentoring Experience

Current:

- PhD Students
 - Yangyang Zou, OSU CEGE: January 2016-present
 - Hanyang Li, OSU CEGE: August 2016-present
- Undergraduate Students
 - Alexandra Ng: August 2018-present
 - Di Xu: August 2019-present

Previous:

- Master's Students: Ziyang Lei, Johnson Luma, Anjelica Moreno
- Undergraduate Theses: David Kormos, Emma van Dommelen
- Undergraduate Non-thesis: Ehsan Ali, Simon Bartos, Bailey Burdue, Sachinda Liyanaarachchi, Bennett Wildey
- Summer Undergraduate Research: Gustavo Acra de Oliveira, Abigail Kaye, Anshuman Mishra
- High School Interns: Matthew Frastaci, Cyrus Lloyd, Joshua Remeis

Awards and Honors

- Engineer-in-training, State of Delaware (2006)

Service to National Organizations

indicates elected positions

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

Service to Regional Organizations

- 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 (number since 2016)
 - *Aerosol Science & Technology* (1)
 - *Atmospheric Chemistry & Physics* (4)
 - *Atmospheric Environment* (5)
 - *Environmental Science & Technology* (2)
 - *Geophysical Model Development* (1)
 - *Geophysical Research Letters* (1)
 - *Fire* (1)
 - *Journal of Aerosol Science* (2)
 - *Journal of Geophysical Research – Atmospheres* (2)
 - *Science of the Total Environment* (1)
- Editorial board for *Applied Sciences* (journal), Environmental and Sustainable Science and Technology section
- National Science Foundation external proposal reviewer:
 - Environmental Engineering: 2017 (panel)
 - Computational and Data-Enabled Science and Engineering: 2017 (ad hoc)
- National Oceanic and Atmospheric Administration external proposal reviewer
 - Atmospheric Chemistry, Climate, and Carbon Cycle: 2019 (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 Engineering Undergraduate Honors Committee: 2017-present
- OSU Engineering Core Curriculum Committee: 2020-present

Peer-Reviewed Publications (since 2016)

*Indicates trainees working under my supervision

- 1) 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.* Accepted.
- 2) Roostaeei, 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.
- 3) 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.
- 4) 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
- 5) 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.
- 6) 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.
- 7) 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.
- 8) 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.
- 9) Haines, S.R.. et al. “Ten questions concerning the implications of carpet on indoor chemistry and microbiology.” *Building and Environment.* 170 (2020): 106589.
- 10) 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.
- 11) 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.
- 12) 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.
- 13) Li, X.; Dallman, T.R.; May, A.A.; Stanier, C.O.; Grieshop, A.P.; Lipksy, E.M.; Robinson, A.L.; Presto, A.A. “Size distribution of vehicle emitted primary particles measured in a traffic tunnel.” *Atmos. Environ.* 181 (2018): 9-18.
- 14) Saliba, G.; et al. “Gasoline direct injection (GDI) and port fuel injection (PFI) vehicle emissions: Effects of emissions certification standard, cold start, secondary organic aerosol formation potential, and potential climate impact.” *Environ. Sci. Technol.* 51 (2017): 6542-6552.
- 15) Bian, Q.; Jathar, S.H.; Kodros, J.K.; Barsanti, K.C.; Hatch, L.E.; May, A.A.; Kreidenweis, S.M.; Pierce, J.R. “Secondary organic aerosol formation in biomass-burning plumes: Theoretical analysis of lab studies and ambient plumes.” *Atmos. Phys. Chem.* 17 (2017): 5459-5475.
a) 10%: I contributed to the interpretation of results and edited the manuscript.
- 16) Li, X.; Dallmann, T.R.; May, A.A.; Tkacik, D.S.; Lambe, A.T.; Jayne, J.T.; Croteau, P.L.; Presto, A.A. “Gas-particle partitioning of vehicle emitted primary organic aerosol measured in a traffic tunnel.” *Environ. Sci. Technol.* 50 (2016): 12146-12155.
- 17) Zhao, Y.; Nguyen, N.T.; Presto, A.A.; Hennigan, C.J.; May, A.A.; Robinson, A.L. “Intermediate Volatility Organic Compound Emissions from On-road Gasoline Vehicles and Small Off-road Gasoline Engines.” *Environ. Sci. Technol.* 50 (2016): 4554-4563.

Professional Presentations (as presenting author since 2016)

Platform presentations italicized

Invited talks underlined

- 1) 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.
- 2) Ashland University Biennial Symposium against Indifference, “Using Low-Cost Sensors to Improve the Spatial Coverage of Air Quality Measurements” Ashland, OH, January 2020.
- 3) 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.
- 4) American Association for Aerosol Research Annual Conference, “Modeling Water Uptake by Dust in Residential Environment.” Portland, OR, October 2019.
- 5) American Association for Aerosol Research Annual Conference, “Estimating Volatility Distributions of Primary Organic Aerosols Using Artifact-Corrected Quartz Filters.” Portland, OR, October 2019.
- 6) 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.
- 7) 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.
- 8) 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.
- 9) Ohio Transportation Engineering Conference, “Using Transit Vehicles to Monitor Air Quality”, Columbus, OH, October 2017.
- 10) The Ohio State University, Division of Environmental Health Sciences, “Towards understanding “unregulated” particulate matter: A brief overview of smog chamber experiments”, Columbus, OH, February 2017.
- 11) NSF South Big Data Hub Data Science Roundtable, “Incorporating Citizen Science into Real-Time Sensor-Based Estimates of Traffic-Related Air Pollution Exposure: Applications for Education, Patients, and Population Health”, Web-based meeting, January 2017.
- 12) The Ohio State University, Center for Automotive Research Membership Exploratory Research Program, “Quantification of Tailpipe Emissions from Gasoline-Electric Hybrid Vehicles during Engine Restarts”, Detroit, MI, December 2016.
- 13) Ohio Transportation Engineering Conference, “Using a Transit System as a Mobile Platform for Air Quality Monitoring in Urban Areas”, Columbus, OH, October 2016.