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## **Xiaomeng Jin**

Assistant Professor

Department of Environmental Sciences  
Rutgers, The State University of New Jersey  
E-mail: xiaomeng.jin@rutgers.edu

### **EDUCATION**

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**Columbia University, New York, NY, USA** Sep. 2015 – June 2020  
*Doctor of Philosophy*, Earth and Environmental Sciences

**University of Wisconsin-Madison, Madison, WI, USA** Sep. 2013 – May 2015  
*Master of Science*, Environment and Resources; *Graduate Certificate*, Energy Analysis and Policy

**Wuhan University, Wuhan, Hubei, China** Sep. 2009 – June 2013  
*Bachelor of Engineering*, Remote Sensing Science and Technology

### **PROFESSIONAL EXPERIENCE**

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2023 – present Assistant Professor, Rutgers University

2020 – 2022 NOAA Climate & Global Change Postdoctoral Fellow, UC Berkeley

2018 – 2020 NASA Earth and Space Science Graduate Fellow, Columbia University

2015 – 2018 Graduate Research Assistant, Columbia University

2017 – 2019 Project Collaborator, NASA HAQAST Tiger Team Projects

2013 – 2015 Research Assistant, University of Wisconsin-Madison

2012 – 2013 Undergraduate Researcher, Wuhan University

### **TEACHING EXPERIENCE**

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#### ***After joining Rutgers:***

Spring 2025 Guest Lecturer, Principles of Air Pollution, Rutgers University

Fall 2024 Guest Lecturer, Bioenvironmental Engineering Graduate Seminar, Rutgers University

Fall 2024 Environmental Science Analysis, Rutgers University

Spring 2024 Air Quality Modeling, Rutgers University

Fall 2023 Research Computing in Atmospheric and Environmental Sciences, Rutgers University

Fall 2023 Guest Lecturer, Remote Sensing of Atmosphere and Ocean, Rutgers University

Fall 2023 Guest Lecturer, Bioenvironmental Engineering Graduate Seminar, Rutgers University

#### ***Before joining Rutgers:***

March 2021 Guest Lecturer, Special Topics in Air Quality Engineering, UC Riverside

April 2019 Guest Lecturer, Introduction to Atmospheric Chemistry, Columbia University

Fall 2018 Teaching Assistant, Research Computing in Earth Sciences, Columbia University

Spring 2018 Teaching Assistant, Climate System, Columbia University

Spring 2017 Teaching Assistant, Introduction to Atmospheric Chemistry, Columbia University

### **HONORS AND AWARDS**

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2024 NASA Early Career Investigator Program in Earth Science

Dec 2021 16th Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS XVI)

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Mar 2020	NOAA Climate and Global Change Postdoctoral Fellowship
Dec 2019	AGU Fall 2019 Outstanding Student Presentation Award
Oct 2019	MIT Civil and Environmental Engineering Rising Stars 2019
2018 – 2020	NASA Earth and Space Science Fellowship
Dec 2016	AGU Fall 2016 Outstanding Student Paper Award
2015 – 2016	Dean's Fellowship of Columbia University
Sep 2013	Outstanding Thesis Award of Hubei Province, China
2010&2012	Wuhan University Outstanding Student Scholarship

## GRANTS

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1. *Rutgers Climate and Energy Institute Groundworks Grant* 2025 – 2026  
Remote sensing of air pollution powered by artificial intelligence, **sole PI**.
2. *NASA Early Career Investigator Program in Earth Science* 2024 - 2027  
Remote sensing of a hazardous air pollutant (formaldehyde) from wildfires, **sole PI**.
3. *NASA Aura Science Team & Atmospheric Composition Modeling and Analysis Program* 2023 – 2026  
Using satellite observations to diagnose the long-term evolution of nonlinear ozone-NO<sub>x</sub>-VOC-aerosol chemistry over global urban areas, **sole PI**.
4. *NOAA Atmospheric Chemistry, Carbon Cycle and Climate (AC4) Program* 2022 – 2025  
Impacts of precursor emissions from wildfires on O<sub>3</sub>-NO<sub>x</sub>-VOC chemistry over urban areas, **Co-PI**.
5. *NOAA Climate and Global Change Postdoctoral Fellowship* 2020 – 2022  
Reactive nitrogen from wildfires: emissions, chemical evolution and impacts, **PI**.
6. *NASA Earth and Space Science Graduate Fellowship* 2018 – 2020  
Using multi-satellite observations to analyze ground-level ozone sensitivity to NO<sub>x</sub> and VOC precursor emissions, from urban to global scales, **student investigator** (PI: Arlene Fiore).

## PUBLICATIONS

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*Publications or manuscripts as first or corresponding authors* (\*: corresponding authors; ^: graduate or undergraduate students advised by Jin; #: postdoc advised by Jin):

1. Tian, Y.<sup>#</sup>, Wang, S.<sup>^</sup>, and **Jin, X.**<sup>\*</sup> (2025) Global Patterns and Trends in Ground-Level Ozone Chemical Formation Regimes from 1996 to 2022, *Atmospheric Chemistry and Physics*, in press.
2. Shen, J.<sup>#</sup>, Cohen, R., Wolfe, G., and **Jin, X.**<sup>\*</sup>, Impacts of wildfire smoke aerosols on near-surface O<sub>3</sub> photochemistry, *Atmospheric Chemistry and Physics*, in press
3. **Jin, X.**<sup>\*</sup>, Merchant, Z.<sup>^</sup>, Sun, K., Physics-based spatial oversampling of TROPOMI NO<sub>2</sub> observations to US neighborhoods reveals the disparities of air pollution, under review at *GeoHealth*.
4. **Jin, X.**<sup>\*</sup>, Yang, Y.<sup>^</sup>, Gonzalez Abad, G., Nowlan, C., Liu, X., Observing the diurnal variations of ozone-NO<sub>x</sub>-VOC chemistry over the U.S. from the geostationary TEMPO instrument, under second review at *Geophysical Research Letters*.
5. **Jin, X.**<sup>\*</sup>, Fiore, A. M. & Cohen, R. C. (2023). Space-Based Observations of Ozone Precursors within California Wildfire Plumes and the Impacts on Ozone-NO<sub>x</sub>-VOC Chemistry. *Environ. Sci. Technol.* 57, 39, 14648–14660, doi:10.1021/acs.est.3c04411. (*ES&T cover article; featured by NOAA Climate News, Rutgers SEBS News*)

6. **Jin, X.** \*, Zhu, Q., Cohen, R. \*, (2021). Direct estimates of biomass burning NO<sub>x</sub> emissions and lifetime using daily observations from TROPOMI. *Atmos. Chem. Phys.*, 21, 15569–15587, doi: 10.5194/acp-21-15569-2021. (*Selected as an EGU highlight article*)
7. **Jin, X.** \*, Fiore, A., Boersma, K.F., De Smedt, I., Valin, L., (2020). Inferring changes in summertime surface ozone-NO<sub>x</sub>-VOC chemistry over U.S. urban areas from two decades of satellite and ground-based observations (2020), *Environmental Science & Technology*, 54, 6518–6529. doi: 10.1021/acs.est.9b07785. (*Featured by State of the Planet of Columbia University, MIT News*)
8. **Jin, X.** \*, Fiore, A.M., Civerolo, K., Bi, J., Liu, Y., Donkelaar, A. van, Martin, R.V., Al-Hamdan, M., Zhang, Y., Insaf, T.Z., Kioumourtzoglou, M.-A., He, M.Z., Kinney, P.L., (2019). Comparison of multiple PM<sub>2.5</sub> exposure products for estimating health benefits of emission controls over New York State, USA, *Environmental Research Letters*, 14(8), 084023-14, doi: 10.1088/1748-9326/ab2dcb. (*Featured by Columbia Magazine, State of the Planet, US News, Science Daily, The Medical News etc.*)
9. **Jin, X.** \*, Fiore, A.M., Curci, G., Lyapustin, A., Civerolo, K., Ku, M., van Donkelaar, A., Martin, R.V., (2019). Assessing uncertainties of a geophysical approach to estimate surface fine particulate matter distributions from satellite-observed aerosol optical depth, *Atmos. Chem. Phys.*, 19(1), 295–313, doi:10.5194/acp-19-295-2019.
10. **Jin, X.** \*, Fiore, A.M., Murray, L.T., Valin, L.C., Lamsal, L.N., Duncan, B., Boersma, K.F., De Smedt, I., Abad, G.G., Chance, K., Tonnesen, G.S., (2017). Evaluating a space-based indicator of surface ozone-NO<sub>x</sub>-VOC sensitivity over mid-latitude source regions and application to decadal trends, *Journal of Geophysical Research: Atmospheres*, 122, 10439 – 10461, doi: 10.1002/2017JD026720. (*Featured by NASA Earth Science, NASA Earth Observatory, LDEO news etc.*)
11. **Jin, X.**, Holloway, T. \*, (2015). Spatial and temporal variability of ozone sensitivity over China observed from the Ozone Monitoring Instrument. *Journal of Geophysical Research: Atmospheres*, 120(14), 7229–7246, doi: 10.1002/2015JD023250. (*Web of Science Highly Cited Paper*)

#### **Co-authored publications:**

12. Li, Z., Cohen, J., Qin, K., Lin, J., Jiang, Z., **Jin, X.** (2025), Editorial for “Focus on Atmospheric Remote Sensing and Environmental Change”, *Environmental Research Letters*, accepted.
13. Qiu, M., Kelp, M., Heft-Neal, S., **Jin, X.**, Gould, C., Tong, D., and Burke, M., (2024), valuating Chemical Transport and Machine Learning Models for Wildfire Smoke PM<sub>2.5</sub>: Implications for Assessment of Health Impacts, *Environmental Science & Technology*, 58 (52), 22880-22893, doi: 10.1021/acs.est.4c05922.
14. Tao, M., Fiore, A.M., **Jin, X.**, Schiferl, L.K., Commane, R., Judd, L.M., Janz, Scott., Sullivan, J.T., Miller, P.T., Karambelas, A., Davis, S., Tzortziou, M., Valin, L., Whitehill, A., Civerolo, K., and Tian, Y., (2022), Investigating Changes in Ozone Formation Chemistry during Summertime Pollution Events over the Northeastern United States, *Environmental Science & Technology*, 56 (22), doi: 10.1021/acs.est.2c02972.
15. Li, C., Zhu, Q., **Jin, X.** & Cohen, R. C., (2022), Elucidating Contributions of Anthropogenic Volatile Organic Compounds and Particulate Matter to Ozone Trends over China. *Environmental Science & Technology*, 56 (18), 12906–12916, doi: 10.1021/acs.est.2c03315.

16. Delaria, E., Place, B., Turner, A., Zhu, Q., **Jin, X.**, Cohen, R., (2021). Development of a solar induced fluorescence-canopy conductance model and its application to stomatal reactive nitrogen deposition, *ACS Earth and Space Chemistry*, doi:10.1021/acsearthspacechem.1c00260.
17. He, M.Z., Do, V., Liu, S., Kinney, P., Fiore, A.M., **Jin, X.**, DeFelice, N., Bi, J., Liu, Y., Insaf, T.Z., Kioumourtzoglou M., (2021). Short-term PM<sub>2.5</sub> and cardiovascular admissions in NY State: assessing sensitivity to exposure model choice. *Environ Health*. 20, 93, doi: 10.1186/s12940-021-00782-3.
18. Naimark, J.G., Fiore, A.M., **Jin, X.**, Wang, Y., Klovenski, E., Braneon, C., (2021). Evaluating Drought Responses of Surface Ozone Precursor Proxies: Variations with Land Cover Type, Precipitation, and Temperature. *Geophysical Research Letters*, 48, e2020GL091520, doi:10.1029/2020GL091520
19. McFarlane, C., Isevlambire, P.K., Lumbuenamo, R.S., Ndinga, A.M.E., Dhammapala, R., **Jin, X.**, McNeill, V.F., Malings, C., Subramanian, R., Westervelt, D.M., (2021). First Measurements of Ambient PM<sub>2.5</sub> in Kinshasa, Democratic Republic of Congo and Brazzaville, Republic of Congo Using Field-calibrated Low-cost Sensors. *Aerosol Air Qual. Res.* 21, 200619. <https://doi.org/10.4209/aaqr.200619>.
20. Anenberg, S., Bindl, M., Brauer, M., Castillo, J., Cavalieri, S., Duncan, B., Fiore, A., Fuller, R., Goldberg, D., Henze, D., Hess, J., Holloway, T., James, P., **Jin, X.**, Kheirbek, I., Kinney, P., Liu, Y., Mohegh, A., Patz, J., Jimenez, M., Roy, A., Tong, D., Walker, K., Watts, N., West, J., (2020). Using satellites to track indicators of global air pollution and climate change impacts: Lessons learned from a NASA-supported science-stakeholder collaborative, *GeoHealth*, 4(7), doi: 10.1029/2020gh000270.
21. Diffenbaugh, N., Field, C., Appel, E., Azevedo, I., Baldocchi, D., Burke, M., Burney, J., Ciais, P., Davis, S., Fiore, A., Fletcher, S., Hertel, T., Horton, D., Hsiang, S., Jackson, R., **Jin, X.**, Levi, M., Lobell, D., McKinley, G., Moore, F., Montgomery, A., Nadeau, K., Pataki, D., Randerson, J., Reichstein, M., Schnell, J., Seneviratne, S., Singh, D., Steiner, A., Wong-Parodi, G., (2020). The COVID-19 lockdowns: a window into the Earth System, *Nature Reviews Earth & Environment*, doi:10.1038/s43017-020-0079-1.
22. Du, X., **Jin, X.**, Zucker, N., Kennedy, R., Urpelainen, J., (2020). Transboundary air pollution from coal-fired power generation, *Journal of Environmental Management*, 270, 110862, doi: 10.1016/j.jenvman.2020.110862
23. Kopas, J., York, E., **Jin, X.**, Harish, S., Kennedy, R., Shen, S., Urpelainen, J. (2020). Environmental Justice in India: Incidence of Air Pollution from Coal-Fired Power Plants, *Ecological Economics*, 176, 106711, doi:10.1016/j.ecolecon.2020.106711.
24. Maamoun, N., Kennedy, R., **Jin, X.**, Urpelainen, J., (2020). Identifying coal-fired power plants for early retirement, *Renewable & Sustainable Energy Reviews*, 126, 109833, doi: 10.1016/j.rser.2020.109833.
25. Kim, S.E., Harish, S.P., Kennedy, R., **Jin, X.**, Urpelainen, J., (2020). Environmental degradation and public opinion: the case of air pollution in Vietnam, *Journal of Environment and Development*, 78(112), 107049651988825–27, doi:10.1177/1070496519888252.
26. Diao, M., Holloway, T., Choi, S., O'Neill, S.M., Al-Hamdan, M.Z., Donkelaar, A. van, Martin, R.V., **Jin, X.**, Fiore, A.M., Henze, D.K., Lacey, F., Kinney, P.L., Freedman, F., Larkin, N.K., Zou, Y., Kelly, J.T., Vaidyanathan, A., (2019). Methods, availability, and applications of PM<sub>2.5</sub> exposure estimates derived from ground measurements, satellite, and atmospheric models, *Journal of Air & Waste Management Association*, doi: 10.1080/10962247.2019.1668498.
27. Wong, M. S.<sup>†</sup>, **Jin, X.**<sup>†</sup>, Liu, Z., Nichol, J., Ye, S., Jiang, P., Chan, P., (2015). Geostationary satellite observation of precipitable water vapor using an empirical orthogonal function (EOF) based

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reconstruction technique over Eastern China. *Remote Sensing*, **7**, 5879-5900, doi: 10.3390/rs70505879.

(† Authors contribute equally.)

28. Wong, M., **Jin, X.**, Liu, Z., Nichol, J., Ye, S., Jiang, P., Chan, P., (2015). Multi-sensors study of precipitable water vapour over mainland China. *Int. J. Climatol.*, **35**(10), 3146–3159, doi: 10.1002/joc.4199.

### ***Book Chapters:***

1. **Jin, X.**, Kenagy, H., Li, C., Zhu, Q., Fiore, A., Cohen, C., Intersections between trends in NO<sub>x</sub> and VOCs and the impacts on chemistry of cities, *Advances in Atmospheric Chemistry*, Volume 4, “Urban & Regional Air Quality: Emissions, Chemistry, and Impacts”, World Scientific, in press.

### ***Non-refereed publications:***

1. **Jin, X.**, Fiore, A. M., Geigert, M., (2018), Using satellite observed formaldehyde (HCHO) and nitrogen dioxide (NO<sub>2</sub>) as an indicator of ozone sensitivity in a State Implementation Plan (SIP), *Columbia University Academic Commons*, doi: 10.7916/D8M34C7V.

## **PRESENTATIONS**

### ***Invited Talks:***

1. Observing Ozone-NO<sub>x</sub>-VOC Chemistry from Space, *Gordon Conference of Atmospheric Chemistry*, August 2025, Newry, ME, USA.
2. Observing air quality from space, *Rutgers Newark Earth and Environmental Sciences Seminar*, October 2024, Newark, NJ, USA.
3. Observing air quality from space, *Rutgers University Department of Civil and Environmental Engineering Seminar*, April 2024, New Brunswick, NJ, USA.
4. Observing the air quality impacts of wildfires from space, *Columbia University SEAS Colloquium in Climate Science (SCiCS)*, February 2024, New York, NY, USA
5. Direct estimates of biomass burning NO<sub>x</sub> emissions from satellite observations, *TEMPO Science Team Meeting*, April 2023, virtual.
6. Reactive nitrogen from wildfires: source, chemical evolution and air quality impacts, *NOAA C&GC Summer Institute*, July 2022, Steamboat Springs, CO, USA.
7. Observing air quality from space: sources, chemical formation and health impacts, *San Jose State University Department of Meteorology and Climate Science*, February 2022, virtual.
8. Using satellite observations to guide emission control strategies for surface ozone pollution, *AGU GeoHealth Early Career Webinar*, October 2021, virtual.
9. Observing precursor emissions and chemistry of ground-level O<sub>3</sub> from space, *University of Washington Department of Atmospheric Sciences*, May 2021, virtual.
10. Observing air quality from space: source, chemical formation and health impacts, *University of Michigan Department of Climate and Space Sciences and Engineering*, March 2021, virtual.
11. Observing the chemistry of ground-level O<sub>3</sub> from space, *AGU Fall 2020 Meeting*, December 2020, virtual.

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- 12.Observing the distributions and chemistry of major air pollutants ( $O_3$  and  $PM_{2.5}$ ) from space, *NCAR ACOM Seminar*, August 2020, virtual.
  - 13.Changes of summertime surface ozone- $NO_x$ -VOC chemistry over U.S. urban areas inferred from two decades of satellite and ground based observations, *Photochemical Modeling Coordination Webinar* organized by Maryland Department of the Environment, December 2019, virtual.
  - 14.Comparing  $PM_{2.5}$  exposure products for estimating health benefits of emission controls, *International Aerosol Modeling Algorithms Conference 2019*, December 2019, Davis, CA, USA
  - 15.Infering distributions of ground-level  $PM_{2.5}$  from space: uncertainty, trends over New York State and public health implications, *Air Quality Research Seminars and Discussion (AQRSD)*, NOAA ESRL, October 2019, virtual.
  - 16.Comparing  $PM_{2.5}$  exposure products for estimating health benefits of emission controls in New York, *CDC Tracking Annual Recipient Meeting*, September 2019, Atlanta, GA, USA.
  - 17.Applications of satellite remote sensing to infer distributions and chemistry of two major air pollutants:  $PM_{2.5}$  and  $O_3$ , *NYSDEC Division of Air's Bureau of Air Quality Analysis and Research (BAQAR) Seminar*, June 2019, Albany, NY, USA
  - 18.Using satellite data to guide emission control strategies for surface ozone pollution, *AGU Fall 2017 Meeting*, December 2017, New Orleans, LA, USA.

#### **Conference Presentations:**

1. Global Patterns and Trends in Ozone Chemical Formation Regimes from 1996 to 2022 (poster), *AGU Fall 2024 Meeting*, December 2024, Washington DC, USA.
2. Observing the diurnal cycle of ozone- $NO_x$ -VOC sensitivity from geostationary satellite retrievals of ozone precursors (poster), *AGU Fall 2024 Meeting*, December 2024, Washington DC, USA.
3. Physics-based spatial oversampling of TROPOMI  $NO_2$  observations to US neighborhoods reveals the disparity of air pollution (oral), *AGU Fall 2024 Meeting*, December 2024, Washington DC, USA.
4. Using Satellite Observations to Diagnose the Nonlinear Ozone- $NO_x$ -VOC Chemistry over Global Urban Areas (oral), *AMS Annual Meeting 2025*, January 2025, New Orleans, LA, USA.
5. Observing the diurnal cycle of ozone- $NO_x$ -VOC sensitivity from geostationary satellite retrievals of ozone precursors (oral), *AMS Annual Meeting 2025*, January 2025, New Orleans, LA, USA.
6. Observing the impacts of wildfires on ozone- $NO_x$ -VOC-aerosol chemistry from space, *HAQAST Meeting*, June 2024, Cambridge, MA, USA.
7. Remote sensing of air pollution powered by machine learning, *Rutgers CASS Workshop*, April 2024, New Brunswick, NJ, USA.
8. Impacts of wildfires on air quality: not just particulate matter, *AMS Annual Meeting*, January 2024, Baltimore, MD, USA.
9. Space-based observations of ozone precursors within wildfire plumes and the impacts on Ozone- $NO_x$ -VOC chemistry, *AGU Fall 2023 Meeting*, December 2023, San Francisco, CA, USA.
- 10.The impacts of wildfires on air quality: not just particulate matter, *2023 AEESP Research and Education Conference*, June 2023, Boston, MA, USA.

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11. Using TEMPO observations to diagnose nonlinear O<sub>3</sub>-NO<sub>x</sub>-VOC chemistry (oral), *TEMPO Science Team Meeting*, April 2023, virtual.
  12. Supporting the use of satellite data in state implementation plans for air quality (oral), *NOAA C&GC Summer Institute*, July 2022, Steamboat Springs, CO.
  13. Direct estimates of biomass burning NO<sub>x</sub> emissions and lifetime using daily observations from TROPOMI (oral and poster), IGAC 2021, September 2021.
  14. Observing chemistry of ground-level ozone from space (poster), TEMPO Science Team Meeting (virtual), August 2020.
  15. Two decades of ground-level Ozone-NO<sub>x</sub>-VOC chemistry over U.S. urban areas inferred from satellite and ground-based observations (oral), AMS Annual Meeting, Boston, MA, USA, January 2020.
  16. Short-term changes in ozone precursors during 2018 California wildfires observed from TROPOMI (poster), *AGU Fall 2019 Meeting*, San Francisco, CA, USA, December 2019. (Outstanding Student Paper Award winner)
  17. Using space-based observations to guide emission control strategies for surface ozone pollution (oral), *MIT CEE Rising Stars Workshop*, Cambridge, MA, USA, October 2019.
  18. Comparing PM<sub>2.5</sub> exposure products for estimating health benefits of emission controls: the value of satellite remote sensing (oral), *FASCINATE Workshop*, NCAR, Boulder, CO, USA, September 2019.
  19. Diagnosing long-term and short-term changes in ozone production sensitivity to precursor emissions over U.S. urban area (oral), Aura Science Team Meeting, Pasadena, CA, USA, August 2019.
  20. Two-decade changes of ground-level ozone-NO<sub>x</sub>-VOC chemistry over the U.S. urban areas: the view from space (poster), *NASA HAQAST 6 Meeting*, Pasadena, CA, USA, July 2019.
  21. Diagnosing long-term and short-term changes in ozone production sensitivity to precursor emissions: the view from space (poster), *9th GEOS-Chem Meeting*, Cambridge, MA, USA, May 2019.
  22. Diagnosing long-term and short-term changes in ozone production sensitivity to precursor emissions: the view from space (poster), *EGU General Assembly 2019*, Vienna, Austria, April 2019.
  23. Quantifying the health benefits of emission reduction over New York State using multiple PM<sub>2.5</sub> products (oral), *HAQAST5 Meeting*, Phoenix, AZ, USA, January 2019.
  24. Diagnosing the long-term changes in ozone production sensitivity to precursor emissions: perspectives from two-decade multi-satellite observations (oral), *AGU Fall 2018 Meeting*, Washington D.C., USA, December 2018.
  25. Diagnosing the sensitivity of surface ozone pollution to precursor emissions: the view from space (poster), *Air Pollution Extreme Workshop*, New York, NY, USA, November 2018.
  26. Analyzing uncertainties in a geophysical approach to estimate surface PM<sub>2.5</sub> from satellite AOD (oral), *NASA HAQAST4 Meeting*, Madison, WI, USA, July 2018.
  27. Mapping PM<sub>2.5</sub> exposure over Northeast USA with model, satellite and in-situ data (poster), *AGU Fall 2017 Meeting*, New Orleans, LA, USA, December 2017.
  28. Combining satellite data and CMAQ model to map PM<sub>2.5</sub> exposure over the Northeast USA (oral), *NASA HAQAST3 Meeting*, Lamont-Doherty Earth Observatory, Palisades, NY, USA, November 2017.

29. Evaluating a space-based indicator of surface ozone sensitivity to emissions of NO<sub>x</sub> vs. NMVOC and applications to decadal trends (oral), *8th GEOS-Chem Meeting*, Harvard University, Cambridge, MA, USA, May 2017.
30. Estimating PM<sub>2.5</sub> exposure across Northeast US from satellite observations (poster), *NYC Metro Area Energy & Air Quality Data Gaps Workshop*, Lamont-Doherty Earth Observatory, Palisades, NY, US, May 2017.
31. Decadal trend of ozone-NO<sub>x</sub>-VOC sensitivity over New York State: the view from space (poster), *NYC Metro Area Energy & Air Quality Data Gaps Workshop*, Lamont-Doherty Earth Observatory, Palisades, NY, USA, May 2017.
32. Evaluating a space-based indicator of surface ozone sensitivity to emissions of NO<sub>x</sub> vs. NMVOC over major northern mid-latitude source regions (oral), *AGU Fall 2016 Meeting*, San Francisco, CA, USA, December 2016. (Outstanding Student Paper Award winner)
33. Decadal trend of surface ozone-NO<sub>x</sub>-VOC sensitivity over China: the view from space (oral), *Chinese Environmental Scholars Forum*, Princeton University, Princeton, NJ, USA, June 2016.
34. Space-based indicators for surface ozone production (oral), *First Year Graduate Colloquium*, Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY, USA, Apr. 2016.
35. Evaluating a space-based indicator for surface ozone production (poster), *NASA Air Quality Applied Science Team 10th Semiannual Meeting*, U.S. Environmental Protection Agency, NC, USA, Jan. 2016.
36. Evaluating gas-phase chemistry of a global chemistry-climate model using satellite data (poster), *HTAP2 Global and Regional Model Evaluation Workshop*, National Center for Atmospheric Research, Boulder, CO, USA, May 2015.

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## **MENTORING**

### ***Postdocs:***

Jiaqi Shen, Postdoctoral Scholar, September 2023 – present

Yu Tian, Postdoctoral Scholar, July 2023 – June 2024

### ***PhD Advisees:***

Yohan Yang, PhD Student in Environmental Sciences, September 2024 – present

Siyi Wang, PhD Student in Atmospheric Science, June 2023 – present

### ***PhD Thesis Committee:***

Zhongyuan Mi, PhD Student in Exposure Science, Thesis Committee, August 2023 - present

Nina Grant, PhD Student in Atmospheric Science, Thesis Committee, March 2024 - present

### ***Undergraduate RA or Senior Thesis:***

Tomer Silberberg, Aresty Research Assistant, September 2024 – present

Nideesh Kumar, Aresty Research Assistant, June 2024 – present

Zaina Merchant, Aresty Research Assistant, JJ Slade Scholar, August 2023 – present

Charlotte Orton, Aresty Research Assistant, September 2023 – May 2024

Chitral Samala, George Cook senior honors thesis program, May 2023 – December 2023

Camila De Leon, Douglas Women in Science and Engineering (WiSE) Program, Spring 2023.



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## **SERVICE ACTIVITIES**

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### ***University and Departmental Service:***

Department Information Technology (Computer) Committee, since 2023

Departmental Faculty Secretary, 2023 - 2024

Curriculum Committee of the Graduate Program in Atmospheric Science, 2024 - 2025

Curriculum Committee of the Undergraduate Program in Environmental Engineering, since 2025

### ***Academic Service:***

Session Chair at AMS Annual 2025 Meeting: *Impacts of Wildfires*.

Program Chair for 28<sup>th</sup> Atmospheric Chemistry Conference, AMS 2026 Annual Meeting.

AMS Atmospheric Chemistry Committee Member, since 2024.

Session Co-Convener at American Geophysical Union Fall 2020 Meeting:

*The Effect of the COVID-19 Outbreak on Air Pollution and Urban Carbon Emissions*

*Characterizing and Incorporation Uncertainty in Health Impacts from Climate and Air Pollution*

**Proposal Reviewer:** NASA, EPA, NSF

### **Journal Editor:**

Guest Editor, Special Issue Atmospheric Remote Sensing and Environmental Change, Environmental Research Letters, 2023 – 2024.

### **Journal Reviewer:**

*ACS Earth and Space Chemistry; ACS Environmental Au; Air Quality, Atmosphere & Health; Atmospheric Chemistry & Physics; Atmospheric Environment; Atmospheric Measurement Techniques; Atmosphere; Environmental Science & Technology; Environmental Research Letters; Environmental Science & Technology Letters; Environmental Research; Environmental Science: Processes & Impacts; Environmental Science: Atmospheres; Environmental Chemistry Letters; Environmental Pollution; Geophysical Research Letters; Geohealth; One Earth; Plos One; IEEE Transactions on Geoscience and Remote Sensing; Journal of Geophysical Research: Atmospheres; Environment International; Journal of Applied Remote Sensing; Journal of Environmental Management; Nature Communications; Nature Climate Change; Natural Hazards and Earth System Sciences; Nature Geoscience; npj Climate and Atmospheric Science; Processes; Remote Sensing of Environment; Science Advances; Science Bulletin; Scientific Reports.*