Curriculum Vitae

Yang Liu, PhD

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EDUCATION

2004 Harvard University, Graduate School of Arts and Sciences
PhD, Environmental Sciences and Engineering (Advisors: Peter Rogers, Daniel Jacob, Petros Koutrakis)

1999 University of California at Davis
MS, Mechanical Engineering (Advisor: Ian Kennedy)

1997 Tsinghua University, China
BS, Environmental Sciences and Engineering (Advisors: Kebin He and Lixin Fu)

PROFESSIONAL EXPERIENCE

Academic Appointments

2020- Professor, Gangarosa Department of Environmental Health, Rollins School of Public Health Emory University, Atlanta, GA

2019- Director, Emory Climate and Health Research Incubator

2014- Associate Professor with Tenure, Gangarosa Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA

2009-2013 Assistant Professor, Gangarosa Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA

2007-2008 Research Associate

2005-2007 Postdoctoral Research Fellow, Harvard T.H. Chan School of Public Health, Boston, MA

1999-2004 Graduate Research Assistant
Harvard John A. Paulson School of Engineering and Applied Sciences, Cambridge, MA

1998-1999 Graduate Research Assistant
University of California, Davis, CA

Other Professional Positions and Training

2019 Atlanta Society of Mentors (ASOM) faculty mentoring workshop series, Emory University

2017 Kauffman FastTrac® TechVentureT Course, Emory University

2004-2005 Associate Consultant, ENVIRON International Corporation, Arlington, VA

05-07/2001 Intern, The World Bank Group, Washington, DC

1997-1998 Associate Consultant, Environmental Resources Management (ERM) Group, Beijing, China

HONORS, FELLOWSHIPS, AND AWARDS

2019 Web of Science Highly Cited Researcher in recognition of exceptional research performance demonstrated by production of multiple highly cited papers that rank in the top 1% for field and year in Cross-Field

2019 William T. Pecora Group Award for achievement in Earth remote sensing as member of the NASA Terra satellite team

2018-2021 Adjunct Professor, the National Institute of Environmental Health, Chinese Center for Disease Control and Prevention

2017-2021 Scientific Advisory Committee Member, National Key R&D Program Project of China "The Chronic Health Risk due to Air Pollution in China", Fuwai Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College

2015-2019 Fulbright Specialist, the U.S. Department of State's Bureau of Educational and Cultural Affairs and the Institute of International Education's Council for International Exchange of Scholars

2016-2019 Visiting Professor, Tsinghua University, China

2016-2019 Oriental Scholar, Shanghai Municipal Government, China

2014-2017 Senior Fellow on Health, Environment and Public Policy, Academy of Media and Public Affairs, Communication University of China

2013-2015 Visiting Professor, The Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences, Beijing, China

2013-2015 Senior Visiting Scholar, Fudan University, Shanghai, China

2009-2012 ORISE faculty fellow at CDC, Oak Ridge Institute for Science and Education

2010 CDC NCEH/ATSDR Honor Award for Excellence in Surveillance and Monitoring, group winner (the Environmental Public Health Tracking Branch)

2010 Fund for Innovative Teaching (FIT), Center for Faculty Development and Excellence, Emory University

2006 Early career and new faculty scientist travel award for participation in the "Air Quality Remote Sensing from Space" workshop at NCAR, Boulder CO

2003 Harvard University Center for the Environment Faculty Research Award (major contributor)

2002 Herbert Winokur, Jr. Fellowship, Harvard Graduate School of Arts and Sciences

2001 Ernst Habicht Fellowship, Harvard Division of Engineering and Applied Sciences

1997 Medal of Honor for Excellent College Graduates, Tsinghua University

1996 "12.9" Fellowship, Tsinghua University

1994 International Engineering and Technology Foundation Scholarship, Tsinghua University

1993, 95, 97 First-class Outstanding Student Scholarship, Tsinghua University

RESEARCH FUNDING

Principal Investigator or Co-Principal Investigator

10/2019-9/2021 High-resolution downscaling of climate data for health impact assessment in the U.S.
Funder: IBM (free supercomputing time on the World Community Grid, weather data from The Weather Company, and IBM Cloud Object Storage) and RSPH (in-kind support)
Goal: generate future bias-corrected projections of temperature and air pollution at 1 km spatial resolution for over 100 years of climate simulations over the contiguous US for detailed climate health impact assessment.
Total Direct Costs: $132,200

10/2019-9/2022 Emory Climate and Health Research Incubator
Funder: Emory Rollins School of Public Health
Goal: catalyze development of major climate and health research projects that can significantly improve the world's ability to respond to climate change and establish Emory as a national and international leader in climate and health.
Total Direct Costs: $500,000

3/2019-2/2020 The impact of transboundary PM2.5 pollution from China to South Korea: a satellite view
Funder: Emory Global Research Cooperation Funding (GRCF) program
Goal: provide high-quality PM2.5 datasets for Korean researchers and air quality management agencies to better understand the complete spatiotemporal characteristics of PM2.5 during heavy air pollution episodes.
Total Direct Costs: $12,900

11/2018-10/2021 Preparing Key State and Local Health and Air Quality Agencies for Upcoming Earth Observations (Grant # 80NSSC19K0191)
Funder: NASA

Goal: prepare the state health and air quality management agencies for the next-generation satellite instruments such as MAIA, TEMPO, and GOES-16.
Total Direct Costs: $822,721
Total Indirect Costs: $189,378

5/2018-4/2019 Evaluating Satellite-based PM2.5 Air Quality Models in Urban East Asia
Funder: Emory University Research Committee
Goal: transfer the satellite PM2.5 models developed in the US to two East Asian urban regions and examine how model accuracy would change when supplied with local parameters.
Total Direct Costs: $39,816

5/2017-3/2018 Developing Advanced PM2.5 Exposure Models in Lima, Peru
Funder: The HERCULES Exposome Research Center
Goal: develop a machine learning model to estimate daily PM2.5 exposure in Lima at 1 km spatial resolution.
Total Direct Costs: $35,000

7/2016-6/2020 Using Earth Observations to Support Regional and National Environmental Health Surveillance (Grant # NNX16AQ28G)
Funder: NASA
Goal: translate knowledge in applying NASA Earth observations in air quality and public health research to our public health partners in the US.
Total Direct Costs: $516,248
Total Indirect Costs: $194,214

6/2016-10/2026 Multi-Angle Imager for Aerosols (MAIA) instrument mission (Contract # 1558091)
Funder: NASA (Announcement of Opportunity NNH12ZDA006O-EVI3)
Goal: design the next generation NASA aerosol sensor and investigate the association between the exposure to PM2.5 components with various health endpoints in world cities.
Total Emory Direct Costs: $1,363,783
Total Emory Indirect Costs: $706,600
Role: member of MAIA science team (PI: David Diner), PI of Emory subcontract

1/2016-12/2020 Wildfires in the Rocky Mountains Region: Current and Future Impacts on $PM_{2.5}$, Health, and Policy (Grant # 83586901-0)
Funder: USEPA
Goal: investigate the impacts of historical and future wildfires on air quality, public health, and environmental management in the Rocky Mountains Region.
Total Direct Costs: $585,493
Total Indirect Costs: $200,596

5/2014-4/2018 NASA ROSES 2013, solicitation A.17 - Aura Science Team: Evaluate, Enhance, and Apply Aura Products in Public Health Tracking (Grant # NNX14AG01G)
Funder: NASA
Goal: develop population weighted solar radiation and UV radiation data for the CDC Tracking network.
Total Direct Costs: $514,262
Total Indirect Costs: $162,921

5/2011-4/2017 NASA Research Opportunities in Space and Earth Sciences (ROSES) 2009, Solicitation A.32 - Air Quality Applied Sciences Team: Improving Satellite Aerosol Remote Sensing Data for Air Pollution Health Research (Grant # NNX11AI53G)
Funder: NASA
Goal: improve the accuracy and spatial coverage of satellite remote sensing data for better applications in air pollution health effects research through investigator-initiated and tiger team projects.
Total Direct Costs: $655,410
Total Indirect Costs: $229,539

1/2009-6/2020 Improving MISR's Capability of Predicting Ground Level $PM_{2.5}$ Concentrations with Observed Aerosol Vertical Profiles (Contract # 1363692)
Funder: NASA Jet Propulsion Laboratory
Goal: develop PM2.5 speciation models using MISR-retrieved aerosol microphysical properties.
Total Direct Costs: $257,861
Total Indirect Costs: $140,571

5/2011-4/2014 Uncertainties in Modeling Spatially-Resolved Climate Change Health Impacts (Grant # 1R21ES020225)
Funder: NIH
Goal: analyze the uncertainty in spatially resolved health impacts projections including the relative importance of various error components in order to improve the characterization of population vulnerability.
Total Direct Costs: $275,000
Total Indirect Costs: $151,250

10/2009-9/2013 Assessing the Cumulative Climate-Related Health Risks in the Eastern U.S. (Cooperative agreement # 1 U01 EH000405)
Funder: CDC
Goal: model health risks associated with three groups of climate-related stressors: direct (heat waves), proximal (air pollution including ozone and PM2.5) and distal (Lyme disease vectors as the prototype).
Total Direct Costs: $647,431
Total Indirect Costs: $230,489

10/2009-9/2013 NASA ROSES 2008, Solicitation A.18 - Decision Support Through Earth Science Research Results: Enhancing Environmental Public Health Tracking with Satellite-Driven Particle Exposure Modeling and Epidemiology (Grant # NNX09AT52G)
Funder: NASA
Goal: estimate the temporal and spatial characteristics of PM2.5 concentrations through an advanced spatial modeling framework that can be used by CDC and its federal, state and local partners to support, and evaluate public health policy and practice related to health impacts of air pollution.
Total Direct Costs: $393,577
Total Indirect Costs: $216,456

9/2009-8/2010 NASA ROSES 2008, Solicitation A.19 - Earth Science Applications Feasibility Studies: Satellite and Model Assisted Accountability Research to Support Clean Air Interstate Rule (SmartCAIR) (Grant # NNX09AQ54G)
Funder: NASA
Goal: develop a satellite-driven PM2.5 sulfate concentration model and compare with other methods of estimating ground-level SO4 concentrations
Total Direct Costs: $85,260
Total Indirect Costs: $26,963

Co-Investigator

5/2020-4/2021 A Big Data Approach to PM2.5 Components, Sources, and Alzheimer's Disease
Funder: Goizueta Alzheimer's Disease Research Center (GADRC)
Goal: identify which components and sources are most responsible for AD risk and progression and better frame environmental policy.
Total Direct Costs: $24,000
Principal Investigator: Liuhua Shi (Emory University)
Role: Co-investigator (2.5% in-kind support)

4/2020-3/2021 A Big Data Approach to PM2.5 and Its Components and Alzheimer's Disease
Funder: The HERCULES Exposome Research Center

Goal: leverage massive datasets of exposure and health outcomes, coupled with advanced statistical methods, to identify which components are most responsible for AD risk and better frame environmental policy.
Total Direct Costs: $30,000
Principal Investigator: Liuhua Shi (Emory University)
Role: Co-investigator (2.5% in-kind support)

4/2019-3/2021 Estimating Spatiotemporally Resolved Pollen Counts in Atlanta Using Low-cost, Automated Sensors and Machine Learning
Funder: The HERCULES Exposome Research Center
Goal: evaluate the spatiotemporal patterns of speciated pollen counts in the Atlanta area by collecting data using an innovative real-time, automated pollen sensor and applying these data in a machine learning model to estimate spatiotemporally-resolved pollen counts.
Total Direct Costs: $45,000
Principal Investigator: Daniel Rochberg (Emory University)
Role: Co-investigator (2.5% effort)

5/2018-4/2023 Extreme heat events and pregnancy duration: a national study (Grant # 1R01ES028346)
Funder: NIH
Goal: use large national databases and robust methodological approaches to advance our understanding of the effects of extreme heat on reproductive health.
Total Direct Costs of Emory contract: $2,382,690
Total Indirect Costs of Emory contract: $1,262,333
Principal Investigator: Howard Chang (Emory University)
Role: Co-investigator (7.5% effort)

5/2017-1/2022 Data Integration Methods for Environmental Exposures with Applications to Air Pollution and Asthma Morbidity (Grant # 1R01ES027892)
Funder: NIH
Goal: develop novel spatial-temporal statistical methods for estimating ambient air pollution exposures and their health effects.
Total Direct Costs of Emory contract: $2,256,167
Total Indirect Costs of Emory contract: $1,146,333
Principal Investigator: Howard Chang (Emory University)
Role: Co-investigator (7.5% effort)

3/2014-12/2018 Evaluate and Enhance Suomi NPP Products for Air Quality and Public Health Applications
Funder: NASA (Grant # NNX15AC28A)
Goal: explore the utility of S-NPP VIIRS products in air pollution exposure assessment.
Total Direct Costs of Emory contract: $60,659
Total Indirect Costs of Emory contract: $33,969
Principal Investigator: Jun Wang (University of Nebraska-Lincoln)
Role: PI of Emory subcontract (10% effort)

12/2013-11/2016 Statistical Methods for Exposure Uncertainty in Air Pollution and Health Studies (Grant # 1R21ES022795)
Funder: NIH
Goal: develop and apply innovative statistical methods for improving exposure assessment and quantifying exposure uncertainties in air pollution and health studies.
Total Direct Costs: $247,932
Total Indirect Costs: $196,839
Principal Investigator: Howard Chang (Emory University)
Role: Co-investigator (10% effort)

9/2011-4/2016 Spatial and temporal modeling of $PM_{2.5}$ and infant morbidity (Grant # 1R01ES019897)
Funder: NIH
Goal: examine the relationship between ambient PM2.5 exposure and the risk of infant bronchiolitis and otitis media.

Principal Investigator: Veronica Vieira (UC Irvine)
Total Direct Costs of Emory contract: $266,724
Role: Co-Investigator (5% effort)

6/2012-5/2014 NASA Applied Remote SEnsing Training (ARSET) air quality project (Contract # 0000011758)
Funder: NASA via University of Maryland
Goal: prepare and conduct in-person training workshop on the application of satellite data in air quality management and public health.
Total Direct Costs of Emory contract: $20,118
Total Indirect Costs of Emory contract: $7,846
Principal Investigator: Ana Prados (University of Maryland)
Role: Co-investigator (8% effort)

1/2011-12/2013 NASA ROSES 2010, solicitation A.22 - NPP Science Team: Evaluate and Enhance the VIIRS Aerosol EDRs for Air Quality and Public Health Applications (Grant # NNX11AJ03G)
Funder: NASA
Goal: assess and improve the surface reflectance characterization scheme used in VIIRS algorithm for AOT retrievals, evaluate the VIIRS AOT retrieval in dusty conditions, and conduct the independent retrieval of AOT and surface PM for evaluating the VIIRS atmospheric suspended matter EDR.
Total Direct Costs of Emory contract: $39,715
Total Indirect Costs of Emory contract: $21,843
Principal Investigator: Jun Wang (University of Nebraska-Lincoln)
Role: PI of Emory subcontract (10% effort)

1/2011-12/2016 The Emory/Georgia Tech Collaborative: Multi-Scale Assessment of Health Effects of Air Pollution Mixtures Using Novel Measurements and Models (Grant # D83479901)
Funder: USEPA
Goal: establish an Emory/Georgia Tech center for the study of health effects of air pollution mixtures.
Total Costs: $7,999,779
Principal Investigator: Paige Tolbert (Emory) and Ted Russell (Georgia Tech)
Role: Co-Investigator (10% effort)

8/2009-4/2013 Effect of Air Pollution and Traffic on Birth Outcomes (Grant # R01ES016317/A07290)
Funder: NIH
Goal: investigate the effects of maternal exposure to ambient air pollution and traffic using an existing cohort of women followed prospectively throughout pregnancy and birth certificate data to investigate the risk of low birth weight, preterm delivery, and small for gestational age.
Total Direct Costs of Emory contract: $59,032
Total Indirect Costs of Emory contract: $32,467
Principal Investigator: Kathy Belanger and Michelle Bell (Yale University)
Role: PI of Emory subcontract (5% effort)

6/2010-5/2011 Application of Satellite Aerosol Remote Sensing Technology to Estimate the Health Impacts of Airborne Particles
Funder: Harvard NIEHS Center for Environmental Health Pilot Program
Goal: develop satellite-driven PM2.5 exposure models during severe haze events in Northern China Plain
Total Costs: $25,000
Principal Investigator: Zhaoxi Wang (Harvard University)
Role: Collaborator

6/2008-5/2009 Integrating Satellite and Monitoring Data to Estimate the Health Impacts of Airborne Particles Pre- and Post-Beijing Olympic Games 2008
Funder: Harvard University Center for the Environment

Goal: understand the impact of emissions control policies before and during the 2008 Beijing Olympic Games with a satellite-driven statistical model.
Total Costs: $25,000
Principal Investigator: David Christiani and Petros Koutrakis (Harvard University)
Role: Co-investigator

1/2006-12/2008 Integrating satellite and monitoring data to retrospectively estimate monthly PM2.5 concentrations in the eastern United States
Funder: Health Effects Institute
Goal: assess the ability of approaches that use satellite AOD from NASA's MISR and MODIS to fill spatial and temporal gaps in existing monitoring networks in the eastern United States.
Total Costs: $300,000
Principal Investigator: Chris Paciorek (Harvard University)
Role: Co-Investigator (10% effort)

INTERNATIONAL RESEARCH COLLABORATION

2011–2013 Aerosol Retrieval in North China Plain Based on MISR and GEOS-Chem Simulations (Grant # OFSLRSS201103)
Funder: Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences
Principal Investigator: Liangfu Chen (Chinese Academy of Sciences)
Role: Collaborator

2014–2018 Acute Effects of Fine Particulate Matter Estimated from Satellite Remote Sensing Data on Population Mortality (Grant # 81372950)
Funder: Chinese National Science Foundation
Principal Investigator: Guoxing Li (Peking University, China)
Role: Collaborator

PROPOSALS UNDER REVIEW

R01: Cardiovascular health and exposure to PM2.5 constituents: a multi-cohort study
Sponsor: NIH
Role: MPI, contact PI

R01: Cardiometabolic biomarkers, DNA methylation and PM2.5 exposure in high-risk adults
Sponsor: NIH
Role: MPI, contact PI

PUBLICATIONS

Google scholar citation statistics (as of May 2020): Google Scholar citations: 28831, h-index: 57, i10-index: 129.
Peer-Reviewed Articles (Student/postdoc first authors indicated with an asterisk)

1. Stowell J*, Bi J, Al-Hamdan M, Lee H, Lee S, Freedman F, Kinney P, Liu Y. Estimating PM2.5 in Southern California using satellite data: factors that affect model performance. *Environ Res Lett*. In press. (Corresponding author)
2. Xiao Q, Geng G, Liang F, Wang X, Zhuo L, Lei Y, Huang X, Zhang Q, Liu Y, He K. 2020. Changes in spatial patterns of PM2.5 pollution in China 2000-2018: Impact of clean air policies. Environ Int. 141:105776.
3. Wang Y, Zhao Y, Zhang L, Zhang J, Liu Y. 2020. Modified regional biogenic VOC emissions with actual ozone stress and integrated land cover information: A case study in Yangtze River Delta, China. *Sci Total Environ*. 727: 138703. PMID: 32334230.
4. Tapia V, Vasquez B, Vu B, Liu Y, Steenland K, Gonzales GF. Association between maternal exposure to particulate matter (PM2.5) and adverse pregnancy outcomes in Lima, Peru. *J Expo Sci Env Epid*. In press.
5. Yang X, Liang F, Li J, Chen J, Liu F, Huang K, Cao J, Chen S, Xiao Q, Liu X, Shen C, Yu L, Lu F, Wu X, Wu X, Li Y, Hu D, Huang J, Lu X, Liu Y, Gu D. 2020. Associations of long-term exposure to ambient PM2.5 with mortality in Chinese adults: A pooled analysis of cohorts in the China-PAR project. *Environ Int*. 138: 105589. PMID: 32146266. (Co-corresponding author)

6. Geng G*, Meng X, He K, Liu Y. 2020. Random forest models for PM2.5 speciation concentrations using MISR fractional AODs. *Environ Res Lett*. 15:034056. (Corresponding author)
7. Wang N, Cong S, Bao H, Fan J, Wang B, Chen M, Feng Y, Yang T, Liu Y, Wang L, Wang C, Hu W, Fang L. 2020. Geographic and population disparities of COPD prevalence in China: a spatial analysis of a national study. *Int J Chron Obstruct Pulmon Dis*. 15: 367-377. PMID: 32103935, PMCID: PMC7025678
8. Bi J*, Wildani A, Chang H, Liu Y. 2020. Incorporating Low-Cost Sensor Measurements into High-Resolution PM2.5 Modeling at a Large Spatial Scale. *Environ Sci Technol*. 54: 2152-2162. PMID: 31927908 (Corresponding author)
9. Freedman F, English P, Wagner J, Liu Y, Venkatram A, Tong D, Al-Hamdam M, Sorek-Hamer M, Chatfield R, Rivera A, Kinney P. 2020. Spatial Particulate Fields During High Winds in the Imperial Valley, California: An Analysis Using Satellite and Low-Cost Sensor Measurements. *Atmos*. 11 (1):88.
10. Lv Y, Lv Y, Zhou J, Kraus V, Li T, Sarnat J, Wang J, Liu Y, Chen H, Brasher M, Mao C, Zeng Y, Zheng T. 2020. Long-term exposure to fine particulate matter and incidence of disability in activities of daily living: a cohort study among Chinese oldest old. *Environ Pol*. 259: 113910. PMID: 32023791.
11. Liang F*, Liu F, Huang K, Yang X, Li J, Xiao Q, Chen J, Liu X, Cao J, Shen C, Yu L, Lu F, Wu X, Wu X, Li Y, Hu D, Huang J, Liu Y, Lu X, Gu D. 2020. Long-term Exposure to Fine Particulate Matter and Cardiovascular Disease in China. *J Am Coll Cardiol*. 75(7):707-717. PMID: 32081278.
12. Huang K*, Liang F*, Yang X, Liu F, Li J, Xiao Q, Chen J, Liu X, Cao J, Shen C, Yu L, Lu F, Wu X, Zhao L, Wu X, Li Y, Hu D, Huang J, Liu Y, Lu X, Gu D. 2019. Long-term exposure to ambient fine particulate matter and stroke incidence in China: The China-PAR project. *The BMJ* 367:l6720. PMID: 31888885. (Co-guarantor of overall content)
13. Gupta P, Mamta, Satsangi G, Jangid A, Liu Y, Pani S, Kumar R. 2019. Exposure to respirable and fine dust particle over North-Central India: chemical characterization, source interpretation, and health risk analysis. *Environ Geochem Hlth.* doi: 10.1007/s10653-019-00461-w. PMID: 31823181.
14. Park Y, Kwon B, Heo J, Hu X, Liu Y, Moon T. 2020. Estimating PM2.5 Concentration of the Continental United States via Interpretable Deep Convolutional Neural Networks. *Environ Pollut.* 256: 113395.
15. Watts N, Amann M, Arnell N, Ayeb-Karlsson S, Belesova K, Boykoff M, Byass P, Cai W, Campbell-Lendrum D, Capstick S, Chambers J, Dalin C, Daly M, Dasandi N, Davies M, Drummond P, Dubrow R, Ebi K, Eckelman M, Ekins P, Escobar L, Montoya L, Georgeson L, Graham H, Haggar P, Hamilton I, Hartinger S, Hess J, Kelman I, Kiesewetter G, Kjellstrom T, Kniveton D, Lemke B, Liu Y, Lott M, Lowe R, Sewe M, Maslin M, McAllister L, McGushin A, Mikhaylov S, Milner J, Moradi-Lakeh M, Morrissey K, Murray K, Munzert S, Nilsson M, Neville T, Oreszczyn T, Owfi F, Pearman O, Pencheon D, Phung D, Pye S, Quinn R, Rabbaniha M, Robinson E, Rocklöv J, Semenza J, Sherman J, Shumake-Guillemot J, Tabatabaei M, Taylor J, Wilkinson P, Costello A, Gong P, Montgomery H. 2019. The 2019 report of the Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. *The Lancet*. 394 (10211):1836-1878. PMID: 31733928.
16. Bi J*, Stowell J, Seto E, English P, Al-Hamdan M, Kinney P, Freedman F, Liu Y. 2020. Contribution of Low-Cost Sensor Measurements to the Prediction of PM2.5 Levels: A Case Study in Imperial County, California, USA. *Environ Res*. 180: 108810. PMID: 31630004, PMCID: PMC6899193. (Corresponding author)
17. Yuan L, Zhang Y, Kan H, Liu Y, Xiao Q, Liu C, Gao Y, Tian Y. 2020. Critical windows for maternal fine particulate matter exposure and adverse birth outcomes: the Shanghai birth cohort study. *Chemosphere*. 240:124904. PMID: 31550593.
18. Tapia V, Steenland K, Sarnat S, Vu B, Liu Y, Sánchez-Ccoyllo O, Vasquez V, Gonzales GF. 2020. Time-series analysis of ambient PM2.5 and cardiorespiratory emergency room visits in Lima, Peru during 2010-2016. *J Expo Sci Env Epid*. In press. DOI: 10.1038/s41370-019-0189-3. PMID: 31745179.
19. Stowell J*, Geng G, Saikawa E, Chang H, Liu Y, Strickland M. 2019. Associations of Wildfire-specific PM2.5 Exposure on Cardiorespiratory events in Colorado 2011-2014. *Environ Int*. 133, Part A, article 105151. (Corresponding author)
20. She Q*, Choi M, Belle J, Xiao Q, Bi J, Huang K, Meng X, Geng G, Kim J, Liu M, Liu Y. 2020. Satellite-Based Estimation of Hourly PM2.5 Levels During Heavy Winter Pollution Episodes in the Yangtze River Delta, China. Chemosphere. 239: article 124678. (Co-corresponding author)

21. Huang K*, Bi J, Meng X, Geng G, Lyapustin A, Lane K, , Gu D, Kinney P, Liu Y. 2019. Estimating Daily PM2.5 Concentrations in New York City at the Neighborhood-scale: Implications for Environmental Justice and Integrating Non-regulatory Measurements. *Sci Total Environ*. 697: article 134094. (Corresponding author)
22. Murray N*, Holmes H, Liu Y, Chang H. 2019. Combining Satellite Imagery and Numerical Model Simulation to Estimate Ambient Air Pollution: An Ensemble Averaging Approach. *Environ Res*. 178:108601.
23. Morales-Ancajima V, Tapia V, Vu B, Liu Y, Alarcón-Yaquetto D, Gonzales G. 2019. Increased outdoor PM2.5 concentration is associated with moderate/severe anemia in children aged 6-59 months in Lima, Peru. *Journal of Environmental and Public Health*. Article ID 6127845, 8 pages.
24. Jin X, Fiore A, Civerolo K, Bi J, Liu Y, van Donkelaar A, Martin R, Al- Hamdan M, Zhang Y, Insaf T, Kioumourtzoglou M, He M, Kinney P. 2019. Comparison of seven PM2.5 exposure products for estimating health benefits of emission controls over New York State, USA. *Environ Res Lett*. 14:084023.
25. Wang M, Hou Z, Xu H, Liu Y, Budoff M, Szpiro A, Kaufman J, Vedal S, Lu B. 2019. Long-term exposure to air pollution, traffic proximity and coronary atherosclerosis, a national study in China. *JAMA Network Open*. 2(6):e196553.
26. Zhou Y, Meng X, Belle J, Zhang H, Kennedy C, Al-Hamdan M, Wang J, Liu Y. 2019. Spatiotemporal patterns of solar and UV irradiances in the contiguous United States. *Environ Pollut*. 252 (10): 130-140. (Corresponding author. Paper is the winner of 2020 CDC NCEH/ATSDR Honor Award for Excellence in Science: Data Methods and Study Design)
27. Zou Y, O'Neill S, Larkin N, Alvarado E, Solomon R, Mass C, Liu Y, Odman T, Shen H. 2019. Machine Learning-Based Integration of High-Resolution Wildfire Smoke Simulations and Observations for Regional Health Impact Assessment. *Int J Environ Res Public Health*. 16(12). PMID: 31212933, PMCID: PMC6617359
28. Zhu Q*, Xia B, Zhao Y, Dai H, Zhou Y, Wang Y, Yang Q, Zhao Y, Wang P, La X, Shi H, Liu Y, Zhang Y. 2019. Predicting Gestational Personal Exposure to PM2.5 from Satellite-driven Ambient Concentrations in Shanghai. *Chemosphere*. 233: 452-461. (Co-corresponding author)
29. Yu X, Stuart A, Liu Y, Ivey C, Russell A, Kan H, Henneman L, Sarnat S, Hasan S, Sadmani A, Yang X, Yu H. 2019. On the potential of Google Maps location history data to characterize historical individual mobility for retrospective air pollution health studies. *Environ Pollut*. 252: 924-930.
30. Cromar K, Duncan B, Bartonova A, Benedict K, Brauer M, Habre R, Hagler G, Haynes J, Khan S, Kilaru V, Liu Y, Pawson S, Peden D, Quint J, Rice M, Sasser E, Seto E, Stone S, Thurston G, Volkens J. Air pollution monitoring for health research and patient care: An American Thoracic Society Workshop Report. *Ann Am Thorac Soc*. 16(10): 1207-1214. PubMed: 31573344.
31. Ma Z, Liu R, Liu Y, and Bi J. 2019. Effects of air pollution control policies on PM2.5 pollution improvement in China from 2005 to 2017: a satellite based perspective. *Atmos Chem Phys*. 19:6861-6877.
32. Archer-Nicholls S, Lowe D, Lacey F, Kumar R, Xiao Q, Liu Y, Carter E, Baumgartner J, Wiedinmyer C. Radiative Effects of Residential Sector Emissions in China: Sensitivity to Uncertainty in Black Carbon Emissions. *J Geophy Res - Atmos*. DOI: 10.1029/2018JD030120.
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Peer-reviewed Research Report

1. Paciorek C and Liu Y, Assessment and Statistical Modeling of the Relationship between Remotely-Sensed Aerosol Optical Depth and PM2.5 in the Eastern United States. Res Rep Health Eff Inst. 2012 May; (167):5-83; discussion 85-91. PMID: 22838153.

Book Chapters

1. Contributing author to Chapter 6: Data Discovery, Access and Retrieval. *ISPRS Book series: Environmental tracking for public health surveillance*. S. Morain and A. Budge (eds). 2013 Taylor & Francis Group, London, ISBN 978-0-415-58471-5.

2. Contributing author to Chapter 3: Human Health and Climate Change in the Southeast USA. *The National Climate Assessment Regional Technical Input Series: Climate of the Southeast United States.* K. Ingram, K. Dow, L. Carter, and J. Anderson (eds.). Island Press, Washington, DC, ISBN 978-1-61091-439-0.

Other Scholarly Contributions

1. Liu Y, Effectively Facilitating the Collaboration between the Environmental Health Community in China and Overseas Scholars. 2015. *China Health Review* 6(1): 9-11.

Manuscripts Under Review

1. Bi J, D'Souza R, Rich D, Hopke P, Russell A, Liu Y, Chang H, Ebelt S. Temporal changes in short-term associations between cardiorespiratory emergency department visits and PM2.5 in Los Angeles, 2005 to 2016. Environ Int. Submitted.
2. Liang D, Shi L, Zhao J, Liu P, Schwartz J, Gao S, Sarnat J, Liu Y, Ebelt S, Scovronick N, Chang H. Urban Air Pollution May Enhance COVID-19 Case-Fatality and Mortality Rates in the United States. Lancet. Submitted.
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4. Li T, Chen C, Guo Y, Liu Y, Wang Q, Du H, Zhao L, Xiao Q, Liu Y, Kinney P, Cohen A, Shi X. Health Benefits Related to the China National Action Plan on Air Pollution Prevention and Control: An Accountability Study in Heavily Polluted Regions in China. The Lancet. Submitted.
5. Li G, Li J, Huang J, Wang Y, Yin P, Wang L, Liu Y, Pan X, Zhou M. Differentiate disease burden of ischaemic and haemorrhagic stroke related to ambient nitrogen dioxide exposure: A multicity study in China. Environ Pollut. Submitted.
6. Meng X, Liu C, Zhang L, Liu Y, Kan H. Estimating PM2.5 concentrations in Northeastern China with full spatiotemporal coverage, 2005-2016. *Remote Sens Environ*. Submitted.
7. Xiao Q, Liang F, Ning M, Zhang Q, Bi J, He K, Lei Y, Liu Y. The uncertainties in the long-term trend of PM2.5-related mortality burden in China: 2000-2018. Sci Total Environ. Submitted.
8. Liu R, Liu Y, Shao Y, Zhao W, Bi J, Ma Z. Spatiotemporal distributions of ground ozone levels in China from 2005 to 2017: a machine learning approach. Environ Int. Submitted.
9. Li J, Huang J, Wang Y, Yin P, Wang L, Liu Y, Pan X, Zhou M, Li G. Ambient nitrogen dioxide exposure and disease burden of stroke in 48 Chinese cities. Stroke. Submitted.
10. Huang L, He R , Li J , Hammitt J , Goble R , Bi J, Liu Y. The long-term risk perception profile of the Chinese public towards nuclear power. Nature Energy. Submitted.
11. Tapia V, Steenland K, Vu B, Liu Y, Vasquez V, Gonzales GF. PM2.5 exposure on daily cardio-respiratory mortality in Lima, Peru, from 2010 to 2016. Environ Health. Submitted.
12. Liao J, Liu Y, Steenland K, Pillarisetti A, Thompson L, Dey S, Balakrishnan K, Clasen T. Gestational and Childhood Exposures to Ambient Fine Particulate matter and Child Survival in India: A Retrospective Cohort Study. Lancet Global Health. Submitted.
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16. Wu B, Bai X, Liu W, Lin S, Luo L, Guo Z, Zhao S, Lv Y, Zhu C, Hao Y, Liu Y, Hao J, Duan L, Tian H. Non-negligible Stack Emissions of Non-criteria Air Pollutants from Coal-Fired Power Plants in China: Condensable Particulate Matter and Sulfur Trioxide. *Environ Sci Technol*. In revision.
17. Tapia V, Steenland K, Vu B, Liu Y, Vasquez V, Gonzales G. PM2.5 exposure on daily cardio-respiratory mortality in Lima, Peru, from 2010 to 2016. *Exposure and Health*. Submitted.
18. Wang L, Bi J, Meng X, Geng G, Li J, Huang K, Tang L, Liu Y. Assessment of the long-term efficacy of PM2.5 pollution control policies across the Taiwan Strait. *Remote Sens Environ*. Submitted.
19. Li J, Liu F, Liang F, Huang K, Yang X, Xiao Q, Chen J, Liu X, Cao J, Chen S, Shen C, Yu L, Lu F, Wu X, Zhao L, Wu X, Li Y, Hu D, Huang J, Liu Y, Lu X, Gu D. Long-term effects of high exposure to ambient PM2.5 level on coronary heart disease incidence: A population-based Chinese cohort study. *Environ Sci Technol*. Submitted.

PRESENTATIONS

Invited Presentations

1. Vu B, Bi J, Kondragunta S, Zhang H, Liu Y. Characterizing Hourly $PM_{2.5}$ Levels During the 2018 Camp Fire in California Using GOES 16 Data. **The AGU Fall Meeting**. San Francisco, CA, December 9-13, 2019.
2. Liu Y. How can TEMPO Make a Difference in Air Pollution Exposure Assessment and Health Effects Research. **TEMPO Health Applications Conference**, University of Alabama at Huntsville, October 10, 2019
3. Bi J, Chang H, Wildani A, Liu Y. Applications of Satellite and Low-cost Sensor Data in Estimating PM2.5 Concentrations. **Frontiers of Atmospheric Science and Chemistry: Integration of Novel Applications and Technological Endeavors (FASCINATE),** NCAR Center Green Campus in Boulder, Colorado, September 9 – 12, 2019.
4. Liu Y. Protecting Public Health from Space: the Past, Present, and Future. **2019 CDC Tracking Fall Recipient Workshop**, Atlanta, GA, September 4 – 6, 2019.
5. Geng G. Murray N, Chang H, Liu Y. Satellite-Based Daily PM2.5 Estimates during Fire Seasons in Colorado. **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018.
6. Liu Y, Meng X, Garay MJ, Diner DJ, Kalashnikova O, and Xu J. Estimating PM2.5 Speciation Concentrations Using MISR Aerosol Properties over Southern California: Implications for MAIA. **The 98th American Meteorological Society Annual Meeting**. Austin, TX, January 7-11, 2018.
7. Geng G, Murray N, Tong D, Fu J, Hu X, Lee P, Meng X, Chang H and Liu Y. Current and Future Impacts of Wildfires on PM2.5 and Public Health in Colorado. **American Geophysical Union Fall Meeting**. New Orleans, LA, December 11-15, 2017.
8. Xiao Q, Chen H, Strickland M, Kan H, Chang H, Klein M, Yang C, Meng X, Liu Y. The associations between birth outcomes and satellite-estimated maternal PM2.5 exposure in Shanghai, China. **American Geophysical Union Fall Meeting**. New Orleans, LA, December 11-15, 2017.
9. Liu Y. The Production of County-level Solar and UV Radiation Measures for the Tracking Network. CDC Data Information Webinar. Atlanta, GA, December 4, 2017.
10. Liu Y. Remote Sensing of PM Air Pollution, Exposure Modeling, and Health Effects. **The 27th Annual ISES Meeting**. Durham, NC, October 15 – 19, 2017.
11. Liu Y. Estimating PM2.5 Components Using Satellite Data and Introduction to MAIA. **The Desert Research Institute.** Reno, NV, September 14, 2017.
12. Liu Y. High-resolution characterization of PM2.5 exposure in China at the regional and national scales. **The 1st China Conference on Environment and Health (CCEH 2017).** Beijing, China, August 24-26, 2017.
13. Liu Y. Estimating PM2.5 speciation concentrations using prototype 4.4 km-resolution MISR aerosol properties over Southern California. **A&WMA's 110th Annual Conference & Exhibition**. Pittsburgh, PA, June 5-8, 2017.

14. Liu Y. Integrating monitoring data from multiple technology platforms. **Air Pollution Monitoring for Health Research and Patient Care Workshop, ATS 2017 International Conference**. Washington DC, May 20, 2017.
15. Liu Y. The application of satellite-based PM2.5 exposure models in China. **The National Center for Cardiovascular Diseases of China**. Beijing, China, March 1, 2017.
16. Liu Y. Recent development of the applications of satellite remote sensing in PM2.5 retrieval. **China National Institute of Environmental Health Sciences**. Beijing, China, December 14, 2016.
17. Liu Y. The future of satellite remote sensing in retrieving PM2.5 in China. **The 1st China Eco-Development Forum**, Beijing, China, December 5 – 7, 2016.
18. Liu Y. How Can TEMPO Contribute to Air Pollution Health Effects Research? **The 1st Tropospheric Emissions: Monitoring of Pollution (TEMPO) Applications Workshop**, Huntsville, AL, July 12-13, 2016.
19. Liu Y. Evaluating Population Health Impacts of Climate Change With Downscaled Model Simulations. **Columbia NIEHS Center for Environmental Health**, New York City, March 11, 2016.
20. Liu Y. Satellite Applications in the Monitoring and Modeling of Atmospheric Aerosols. **Second Suomi NPP Applications Workshop**, Huntsville, Alabama, November 18-20, 2014.
21. Liu Y. An Eye in Space: Satellite Applications in Large-Scale $PM_{2.5}$ Exposure Assessment. **School of Environment, Tsinghua University**, Beijing, China. September 3, 2014.
22. Liu Y. 10-Year Spatial and Temporal Trends of $PM_{2.5}$ in the Southeastern U.S. Estimated Using High-Resolution Satellite Data. **A&WMA's 107th Annual Conference & Exhibition**, Long Beach, CA. June 27, 2014.
23. Liu Y. Satellite-Predicted High-Resolution PM2.5 Maps in the Southeastern U.S. **Work-In-Progress Webinar for the Clean Air Research Centers**, U.S. EPA. May 14, 2014
24. Liu Y. Uncertainties in Estimating the Health Impacts of Climate Change in the United States. **Climate-Ready States and Cities Initiative Grantee Meeting**, Atlanta, GA, April 23 – 25, 2014.
25. Liu Y, Cohen A. Monitoring Particulate Pollution from Space: Current State of the Science. **Conference of ISEE, ISES and ISIAQ**, Basel, Switzerland, August 19 - 23, 2013.
26. Klein M, Hu X, Strickland M, Sarnat S, Tolbert P, **Liu Y**. The Application of Satellite Remote Sensing Data in a Time-Series Study of Asthma Exacerbation in Metro Atlanta. **Conference of ISEE, ISES and ISIAQ**, Basel, Switzerland, August 19 - 23, 2013.
27. Liu Y. Enhancing EPHT with Satellite-Driven PM2.5 Exposure Modeling and Epidemiology. **URISA's Fourth GIS in Public Health Conference,** Miami, FL, June 17 - 20, 2013.
28. Liu Y, and Wang Z. The applications of satellite remote sensing in China's air quality monitoring and environmental health research. **Chinese Research Academy of Environmental Sciences (CRAES),** Beijing, China, May 16, 2013.
29. Liu Y. Environmental Challenges to Public Health in China Today – Regional Air Pollution as an Example, **CDC and ATSDR Asian-Pacific American Heritage Month Commemoration Program,** Atlanta, GA, May 23, 2013.
30. Liu Y. Estimating PM Population Exposure from Satellite Data, **Environmental Forum, Nanjing University, School of Environment**, China, December 22, 2011.
31. **Liu Y** and Cohen A. The Applications of Satellite Remote Sensing in Air Pollution Exposure Sciences and Environmental Health Research and Practice. **The 2011 meeting of the International Society of Exposure Science,** Baltimore, MD, October 24, 2011.
32. **Liu Y**, Hu X, and Waller L. Estimating Ground Level PM2.5 Concentrations in Atlanta Metro Area Using Spatial Statistical Models, **Goldschmidt2011**, Prague, Czech Republic, August 14-19, 2011.
33. Liu Y. Estimating PM Exposure with Satellite Remote Sensing. **HEI's 2011 Annual Conference**, Boston, MA, May 2, 2011.
34. Liu Y. Modeling the Spatial Patterns of $PM_{2.5}$ in Georgia With Satellite Remote Sensing and Meteorological Information. **The 91st Annual Meeting of the American Meteorological Society**, Seattle, WA, January 25, 2011.

35. **Liu Y** and Wang Z. Effects of Aerosol Vertical Profiles on Estimating Particle SO4 Concentrations with MISR AOD. **MISR Science Team Meeting,** Pasadena, CA, December 11, and **American Geophysical Union Fall Meeting,** San Francisco, CA, December 16, 2009.

36. Liu Y. Applications of Satellite Remote Sensing Data in Air Pollution and Public Health Research. **Tsinghua University, Department of Environmental Sciences and Engineering**, October 15, and **Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences**, Beijing, China, October 18, 2009.

37. Liu Y. Applications of Satellite Remote Sensing Data in Air Pollution and Public Health Research, **NBDPS Workshop: Linking Environmental Exposures to Birth Defects**, Atlanta, GA, September 21, 2009.

38. Liu Y. Estimating PM2.5 Component Concentrations Using MISR Aerosol Microphysical Properties. **MISR Science Team Meeting,** Pasadena, CA, December 11, 2008.

39. Liu Y. Application of remotely sensed aerosol properties to study regional particle pollution in China. **Institute of Remote Sensing Applications, Chinese Academy of Sciences,** Beijing, China, July 30, 2008.

40. **Liu Y** and Koutrakis P. The impact of smoke plumes from the Greek forest fires on the air quality in Athens. **Symposium on Prevention of Disasters and Their Consequences in Greece: Building Partnerships to Mitigate the Effects of Forest Fires**, Athens, Greece, April 8, 2008.

41. **Liu Y** and Koutrakis P. Estimating the Spatial Distribution of $PM_{2.5}$ Concentrations Using Satellite Data and Land Use Information. **Yale School of Public Health, Center for Perinatal, Pediatric and Environmental Epidemiology,** New Haven, CT, December 19, 2007.

42. **Liu Y** and Koutrakis P. Estimating Long-Term $PM_{2.5}$ Exposure in Massachusetts with GOES Aerosol Remote Sensing Data and Assimilated Meteorology. **Harvard-EPA PM Health Center Science Advisory Committee Meeting,** Boston, MA, November 15, 2007.

43. Liu Y. Applications of Satellite Aerosol Remote Sensing in Air Quality Monitoring and Public Health Research. **National Space Science and Technology Center,** Huntsville, AL, October 3, 2007.

44. Paciorek CJ and **Liu Y**. Integrating Satellite and Monitoring Data to Retrospectively Estimate Monthly $PM_{2.5}$ Concentrations in the Eastern U.S., **Health Effects Institute's Annual Conference**, Chicago, IL. April 15, 2007.

45. Liu Y. Remote Sensing of Atmospheric Aerosols and Its Applications in Public Health Research, **Remote Sensing Technology and Applications Workshop, Harvard Center of Geographic Analysis,** Cambridge, MA, February 15, 2007.

46. Liu Y. The Potentials and Challenges of Applying Satellite Aerosol Remote Sensing Data in Air Pollution Monitoring in China, **Tsinghua University and Beijing Normal University,** Beijing, China, January 8, 2007.

47. Liu Y. Estimating $PM_{2.5}$ Concentrations by Combining MISR AOT with GEOS-CHEM Aerosol Simulations, **24th Annual AAAR Conference,** Austin, TX, October 17, 2005.

Presentations in Professional Meetings (presenter's name in bold)

1. **Liao J**, Liu Y, Pillarisetti A, Clasen T, Steenland K. Model-based exposure to ambient fine particulate matter is associated with infant mortality and child health outcomes among over 200,000 children in India. **The AGU Fall Meeting**. San Francisco, CA, December 9-13, 2019.

2. **Bi J**, Wildani A, Chang H, Liu Y. Incorporating low-cost sensor measurements into high-resolution PM2.5 modeling in a large spatial scale (poster presentation). **The AGU Fall Meeting**. San Francisco, CA, December 9-13, 2019.

3. **Liu Y**. Statistical Power and Health Studies from NASA's Multi-Angle Imager for Aerosols (MAIA). **The 99th AMS Annual Meeting**, Phoenix, AZ, Jan 6-10, 2019.

4. Huang K, Bi J, Meng X, Geng G, Wang Y, Lyapustin A, Kinney P, Lane K, **Liu Y**. Estimating PM2.5 in New York City at 100-m Resolution Using MAIAC AOD: Lessons Learned on Integrating Non-regulatory Measurements. **The 99th AMS Annual Meeting**, Phoenix, AZ, Jan 6-10, 2019.

5. She Q, Liu M, **Liu Y**. GOCI-Based Estimation of Hourly PM2.5 Levels During Heavy Winter Pollution Episodes in the Yangtze River Delta - Implications for ABI and AHI. **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.

6. **Geng G**, Murray N, Tong D, Fu J, Hu X, Lee P, Meng X, Chang H, Liu Y. Satellite-based daily PM2.5 estimates during fire seasons in Colorado (Poster presentation). **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.

7. **Diner D**, Brauer M, Garay M, Hasheminassab S, Jerrett M, Kalashnikova O, Liu Y, Martin R, Nastan A, Ostro B, Ritz B, Schwartz J, Verhulst K, Wang J, Xu F. Associating Speciated Fine Particulate Matter with Adverse Health Outcomes in the Multi-Angle Imager for Aerosols (MAIA) Investigation (Poster presentation). **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.

8. **Geng G**, Murray N, Chang H, Liu Y. The sensitivity of satellite-based PM2.5 estimates to its inputs: implications to model development in data-poor regions (Poster presentation). **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.

9. **Meng X**, Hand J, Schichtel B, Liu Y. Space-time trends of PM2.5 constituents in the Conterminous United States estimated by a machine learning approach, 2005-2015. (Poster presentation). **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.

10. **Stowell J**, Strickland M, Chang H, Liu Y. Associations of Wildfire-specific PM2.5 Exposure on Cardiorespiratory Events in Colorado 2011-2014. **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.

11. Huang K, Xiao Q, Meng X, Geng G, Wang Y, Lyapustin A, Liang F, Gu D, **Liu Y**. Predicting monthly high-resolution PM2.5 concentrations with random forest model in the North China Plain. **The AGU Joint International Network in Geoscience meeting (AJM2018)**, Xi'an, China, October 16 – 20, 2018.

12. **She Q**, Choi M, Belle J, Xiao Q, Bi J, Huang K, Meng X, Geng G, Kim J, Liu M, Liu Y. Satellite-Based Estimation of Hourly PM2.5 Levels During Heavy Winter Pollution Episodes in the Yangtze River Delta, China. **The AGU Joint International Network in Geoscience meeting (AJM2018)**, Xi'an, China, October 16 – 20, 2018.

13. **Liu Y**, Xiao Q, Chang H, Geng G. An ensemble machine-learning model to predict historical concentrations in China from satellite data. **The AGU Joint International Network in Geoscience meeting (AJM2018)**, Xi'an, China, October 16 – 20, 2018.

14. **Xiao Q**, Chen H, Strickland M, Kan H, Chang H, Klein M, Yang C, Meng X, Liu Y. Associations between birth outcomes and maternal PM2.5 exposure in Shanghai: a comparison of three exposure assessment approaches. **The AGU Joint International Network in Geoscience meeting (AJM2018)**, Xi'an, China, October 16 – 20, 2018.

15. Xiao Q, Chang H, **Geng G**, Liu Y. An ensemble machine-learning model to predict historical PM2.5 concentrations in China from satellite data. **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018. (Recipient of ISES-ISEE New Researcher Abstract Award)

16. **Vu B**, Bi J, Sánchez O, Steenland K, Liu Y. Developing advanced PM2.5 exposure models in Lima, Peru. **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018.

17. **Meng X**, Hand J, Schichtel B, Liu Y. Estimating concentrations of PM2.5 species with random forest algorithm across Continental United States during 2005 -- 2015. (poster). **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018.

18. **Bi J**, Belle J, Wang Y, Lyapustin A, Wildani A, Liu Y. Incorporating Snow and Cloud Fractions in Random Forest To Estimate High Resolution PM2.5 Exposures In New York State. **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018.

19. **Bi J**, Vu B, Wildani A, Wang Y, Lyapustin A, Liu Y. Citywide Validation and Improvement of the MAIAC Aerosol Product in Lima, Peru. **The 27th Annual ISES Meeting**. Durham, NC, October 15 – 19, 2017.

20. **Liu Y**., Meng X, Diner DJ, and Garay MJ. Estimating particle speciation concentrations using MISR retrieved aerosol properties in southern California. **AGU Fall Meeting**, San Francisco, CA, December 12-16, 2016.

21. **Liu Y**. Improving satellite-retrieved aerosol microphysical properties using GOCART Data. **ISES Annual Meeting.** Henderson, NV, October 18-22, 2015.

22. **Liu Y**. A High-Resolution Two-Stage Satellite Model to Estimate PM2.5 Concentrations in China. **AGU Fall Meeting**, San Francisco, CA, December 14-19, 2014.

23. **Belle J**, Liu Y. In-Depth Evaluation of MODIS C6 AOD Parameters over the CONUS (poster presentation). **AGU Fall Meeting**, San Francisco, CA, December 14-19, 2014.

24. **Xiao Q**, Holben B, Zhang H, Kim J, Li S, Kondragunta S, Liu Y. Evaluation of VIIRS, GOCI, and MODIS C6 AOD over East Asia (poster presentation). **AGU Fall Meeting**, San Francisco, CA, December 14-19, 2014.

25. **Liu Y**. Overview of the Satellite-based Approaches to Characterize Ambient Air Pollution. **U.S. EPA Clean Air Research Centers Annual Meeting,** Atlanta, GA. September 18-19, 2014.

26. **Liu Y**. SCAPE Report: Development of Satellite-driven PM2.5 Models in the Southeastern US. **U.S. EPA Clean Air Research Centers Annual Meeting**, Atlanta, GA. September 18-19, 2014.

27. **Li S**, Chin M, Garay M, Chen L, Liu Y. Improving MISR-retrieved aerosol properties using GOCART. **AGU Fall Meeting**, San Francisco, CA, December 9-13, 2013.

28. Wang Z, Ma Z, Li S, Xiong X, Li Z, Christiani D, **Liu Y**. Satellite and Ground Observations of the Severe Air Pollution Episodes in North China in Early 2013. **AGU Fall Meeting**, San Francisco, CA, December 9-13, 2013.

29. Wu J, Zhou Y, Gao Y, Fu JS, Johnson B, Huang C, Kim YM, **Liu Y**. Uncertainties in estimating future heat wave mortality in the eastern United States. **Conference of ISEE, ISES and ISIAQ**, Basel, Switzerland, August 19 - 23, 2013.

30. Hu X, **Liu Y**. A Time Series Analysis of PM2.5 Concentrations in the Southeastern U.S. Using MAIAC AOD in a Two-stage Spatial Statistical Model. **Conference of ISEE, ISES and ISIAQ**, Basel, Switzerland, August 19 - 23, 2013.

31. **Liu Y**. Estimating Ground-Level PM2.5 Concentrations in the Southeastern United States Using MAIAC AOD Retrievals and a Two-Stage Model. **American Thoracic Society International Conference,** Philadelphia, PA, May 17 - 22, 2013.

32. **Liu Y**, Li S, Szykman J, Schichtel B. Satellite-Observed Trend in PM2.5 Sulfate Levels in the U.S. and its Surrounding Areas. **AGU Fall Meeting**, San Francisco, CA, December 2, 2012.

33. Hu X, Lyapustin A, Wang Y, and **Liu Y.** Estimating Ground-Level PM2.5 Concentrations in the Southeastern U.S. using MAIAC AOD Retrievals, **ISES Annual Meeting**, Seattle, WA, October 30, 2012.

34. Hu X, and **Liu Y.** Estimating Ground-Level PM2.5 Concentrations in the Southeastern U.S. using MAIAC AOD Retrievals, **AGU Fall Meeting**, San Francisco, CA, December 4, 2011.

35. Li S, Chen L, and **Liu Y.** Retrieval of the Haze Optical Thickness in North China Plain using MODIS data, **AGU Fall Meeting**, San Francisco, CA, December 4, 2011.

36. **Liu Y**, Greenwald R, Sarnat J, Szykman J, Russell T. Intensive Synchronized PM Ground Sampling During the DISCOVER-AQ Campaign, **AGU Fall Meeting** (poster presentation), San Francisco, CA, December 4, 2011.

37. Li S and **Liu Y.** Joint retrieval of aerosol optical properties over North America using GEOS-Chem and MISR, **the 5th International GEOS-Chem Meeting**, Cambridge, MA, May 2, 2011 (poster presentation).

38. **Liu Y**, Hu X, Li S. Comparison of the Aerosol Vertical Profiles by GEOS-Chem and CMAQ in the United States, **MISR Data User Symposium** (oral) and **AGU Fall Meeting** (poster presentation)**,** San Francisco, CA, December 15, 2010.

39. Hu X, Waller L, **Liu Y.** Estimating Ground Level PM2.5 Concentrations in Atlanta Metro Area Using Geographically Weighted Regression, **AGU Fall Meeting,** San Francisco, CA, December 15, 2010. (poster)

40. Zhou Y, Fu J, Levy J, **Liu Y.** Risk-Based Prioritization Among Air Pollution Control Strategies in Yangtze River Delta (YRD), China, **2010 Joint Conference of ISES & ISEE,** Seoul, Korea, August 31, 2010.

41. Crosson W, Al-Hamdan M, Estes M, Estes S, Garbe P, Hemmings S, Klein M, **Liu Y**, McClure L, Qualters J, Quattrochi D, Sarnat J, Vaidyanathan A, Wade G. Examining the use of satellite aerosol remote sensing as a potential means to extend the coverage of the CDC National Environmental Public Health Tracking Network, **American Thoracic Society International Conference,** New Orleans, LA, May 19, 2010.

42. Pachon J, Balachandran S, Trail M, Lee D, Goldman G, Mulholland J, Tolbert P, Sarnat J, Klein M, Strickland M, Sarnat S, **Liu Y**, Darrow L, Russell T. Quantifying Source Impacts on Particulate Matter and Health Outcomes: Some Problems, Some Advances, A Ways Left to Go, **AAAR's third international specialty conference, "Air Pollution and Health: Bridging the Gap from Sources to Health Outcomes"**, San Diego, CA, March 22, 2010.

43. **Liu Y.** Enhancing Environmental Public Health Tracking With Satellite-driven Particle Exposure Modeling And Epidemiology, **The AMS Annual Meeting,** Atlanta, GA, January 19, 2010.

44. **Liu Y.** Estimating Particle Sulfate Concentrations Using MISR Aerosol Properties, **National Environmental Public Health Conference**, Atlanta, GA, October 26, 2009.

45. **Liu Y**, Schichtel B, Koutrakis P, Estimating SO4 Concentrations Using MISR Retrieved Aerosol Properties, **GEOS-Chem User Meeting**, Cambridge, MA, April 8, 2009.

46. **Liu Y,** Wang Z, Koutrakis P, Christiani D, Zhao Q, He K, Air Quality in Beijing During the 2008 Olympic Games Observed by Satellites and Ground Monitors, **American Geophysical Union Fall Meeting,** San Francisco, CA, December 10, 2008.

47. **Liu Y**, Kahn R, Chaloulakou A, Koutrakis P, Multi-sensor Evaluation of the Impact of Forest Fires in August 2007 on the Air Quality in Athens, **EOS Aura Science Team Meeting,** Columbia, MD, October 30, 2008.

48. **Liu Y**, Paciorek P, Estimating PM2.5 Exposure Using Satellite Remote Sensing, Meteorology, and Land Use Information, The **ISEA / ISEE Joint Annual Conference,** Pasadena, CA, October 16, 2008.

49. Paciorek C, **Liu Y,** Macias H, Kondragunta S. Spatio-Temporal Associations of MISR and GOES AOD with Ground-Level PM2.5 Concentrations in Eastern US, **AGU Fall Meeting,** San Francisco, CA, December 12, 2007.

50. **Liu Y**, Kahn R, Turquety S, Yantosca R, Koutrakis P. A Novel Method to Estimate $PM_{2.5}$ Constituent Concentrations and Size Distributions Using Satellite Retrieved Fractional AOD, **Health Effects Institute's Annual Conference,** Chicago, IL, April 15, 2007.

51. **Liu Y**. A Fractional AOD Approach to Derive PM2.5 Information Using MISR Data Coupled with GEOS-CHEM Aerosol Simulation Results, **the 3rd GEOS-Chem User Meeting,** Cambridge, MA, April 11, 2007.

52. **Liu Y**, Kahn R, Turquety S, Yantosca R, Koutrakis P. Estimating PM2.5 Speciation and Size Distributions Using MISR Retrieved Aerosol Microphysical Properties, **MISR user science symposium,** Pasadena, CA, December 6, 2006.

53. Franklin M, **Liu Y**, Koutrakis P. The Importance of Spatial Patterns in Determining the Association Between Satellite-Retrieved AOT and Ground-Level Particulate Matter Air Pollution, **AGU Joint Assembly Meeting,** Baltimore, MD, May 23, 2006.

54. **Liu Y**, Franklin M, Kahn R, Koutrakis P. Comparing the Capability of MISR and MODIS AOD in Estimating Ground-Level $PM_{2.5}$ Concentrations, **Community Workshop on Air Quality Remote Sensing From Space: Defining an Optimum Observing Strategy, National Center for Atmospheric Research,** Boulder CO, February 21, 2006.

55. **Liu Y**. Improving Ambient Fine Particle Pollution Monitoring with MISR Aerosol Product, **MISR Science Team meeting,** Pasadena, CA, December 7, 2004.

56. **Liu Y**. The Application of Satellite Remote Sensing in Estimating Fine Particle Concentrations, **MISR Science Team meeting,** Pasadena, CA, December 15, 2003.

TEACHING

2020	Emory University, RSPH. EH 586: Advanced Seminar in Climate Change and Health: Research and Policy (Course co-instructor)
	Emory University, RSPH. EH 510: Foundations of Exposure Science (Guest lecture)
2019	Emory University, RSPH. EH 501: Introduction to Environmental Health (Guest lecture), EH 510: Foundations of Exposure Science (Guest lecture)
2018	Emory University, RSPH. EH 590R: Satellite remote sensing for health and environmental research (Course instructor)
2017 -	Emory University, RSPH. EH 590R: Intro to EH for EH masters students (Guest lecture)

2015 Emory University, RSPH. EH 540: Environmental Hazards I (Course instructor)
Emory University, RSPH. The Humphrey Fellowship Program (Guest lecture)
Georgia State University, School of Public Health. PH 7155, Air Pollution in the Environment (Guest lecture)

2011- Emory University, RSPH. EH587: Introduction to Satellite Remote Sensing of the Environment and Its Applications in Public Health (Course instructor).

2013 Emory University, RSPH. EH515: Air Quality in the Urban Environment: A Survey of Research methods and Recent Findings (Guest lecture)

2013- Emory University, RSPH. HLTH38-EH590: Genome, Exposome, and Health (Guest lecture)

2011- Emory University, RSPH. EH582: Global Climate Change: Health Impacts and Response (Guest lecture)

2010 Emory University, Center for Faculty Development and Excellence, the Institute for Pedagogy in the Liberal Arts Conference on Teaching Methods and Technology (Participant)
Emory University, RSPH. EH 590R: Environmental Health Journal Club (Guest lecture)

2009 Emory University, RSPH. EH 590R: Environmental Health Journal Club (Guest lecture)

2008 Harvard University, School of Public Health & Cyprus International Institute, EH297, Atmospheric Environment Seminars (Guest lecturer)

2006 Harvard University, School of Public Health, ID 215, Environmental and Occupational Epidemiology (Discussion leader)

2002 Harvard University, School of Engineering and Applied Sciences, ES 168, Aquatic Chemistry (Teaching Fellow)

1996 Tsinghua University, School of Environment, Engineering Design of Domestic Wastewater Treatment Plants (Teaching Assistant).

Postdoc Fellows

In training Jennifer Stowell

Completed Xia Meng (2016-2019), Guannan Geng (2017-2019), Xuefei Hu (2011-2017), Cindy Young (2013-2015), Shenshen Li (2011-2014), Youngmin Kim (2012-2014)

Doctoral Dissertation Committees

Active Qingyang Zhu (GDEH, RSPH, Emory), pre-candidacy faculty advisor
Bryan Vu (GDEH, RSPH, Emory), chair
Nancy Murray (Emory, RSPH, Dept. of Biostatistics and Bioinformatics), committee member

2020 Jianzhao Bi (GDEH, RSPH, Emory), chair
Dissertation: Assessment of High-Resolution PM2.5 Exposures and Changes in PM2.5-Cardiorespiratory Disease Associations Over Time

Jiawen Liao (GDEH, RSPH, Emory), committee member
Dissertation: Advanced Exposure Assessment of Air Pollution and its Effects on Maternal and Child Health in Low-income Settings

2019 Jennifer Stowell (GDEH, RSPH, Emory), chair
Dissertation: Multiple Approaches to Understanding the Intersection of Climate Change, Air Quality & Public Health

Ian Buller (GDEH, RSPH, Emory), committee member
Dissertation: On estimating the spatial distribution of Yersinia pestis in the United States using a wide-ranging sentinel species and spatial statistics with sampling considerations

Keyong Huang (Fuwai Hospital, Chinese Academy of Medical Sciences, China), co-chair with Prof. Dongfeng Gu
Dissertation: Predicting high-resolution PM2.5 concentrations using satellite remote sensing and associations of long-term exposure to ambient PM2.5 with incident hypertension and stroke among Chinese adults

Qiannan She (East China Normal University, China), co-chair with Prof. Min Liu
Dissertation: Studying the Spatiotemporal Patterns of Air Quality as well as Heavy Air Pollution and Their Influencing Factors in the Yangtze River Delta from Multiple Sources of Information

2018 Jessica Bell (GDEH, RSPH, Emory), chair
Dissertation: Advanced gap-filling techniques in satellite-based PM2.5 exposure models and their applications in air pollution epidemiology

Qingyang Xiao (GDEH, RSPH, Emory), chair
Dissertation: The development and application of advanced PM2.5 exposure models driven by satellite data

Heather Strosnider (GDEH, RSPH, Emory), co-chair with Prof. Matthew Strickland
Dissertation: Addressing gaps in the age-specific evidence used for United States air pollution policy

Mariel Friberg (Dept. of Civil and Environmental Engineering, Georgia Tech), committee member
Dissertation: Using Ground-based Observations and Satellite Retrievals to Constrain Urban-to-Regional-Scale Air Quality Chemical Transport Modeling

2017 Fengchao Liang (Health Science Center, Peking University), committee member
Dissertation: A Regional Evaluation on the Spatiotemporal Prediction Models of Ambient PM2.5 and the Effects on Population Mortality

2016 Brooke Alhanti (Dept. of Biostatistics and Bioinformatics, RSPH, Emory), committee member
Dissertation: Methods for Estimating the Effect of Air Pollution on Asthma under a Changing Climate

2015 Zongwei Ma (School of Environment, Nanjing University, China), co-chair with Prof. Jun Bi
Dissertation: Study on Spatiotemporal Distributions of PM2.5 in China Using Satellite Remote Sensing

Xia Meng (School of Public Health, Fudan University, China), committee member
Dissertation: A study of developing air pollution exposure assessment models based on the land use regression model and remote sensing data

2014 Chao Yu (Chinese Academy of Sciences, China), co-chair with Prof. Liangfu Chen
Dissertation: The application of satellite remote sensing in particulate matter study

2012 Jason Vargo (School of Design, Georgia Tech), committee member
Dissertation: Planning for the New Urban Climate: Interactions of Local Environmental Planning and Regional Extreme Heat

Master's Thesis Committees at Emory

2020 Linlin Du (EH), chair; Stefano Rosillo (EH), faculty advisor; Wenhao Wang (EH), chair; Ashley Keese (EH), faculty advisor
2019 Jiachen Zhang (EH), faculty advisor;
2018 Katie Lynch (EH), field advisor; Bryan Vu (EH), chair
2017 Lois Chang (EH), chair
2016 Grete Wilt (EH), chair; Shuang Wang (EH), chair; Erin Finestone (EH), field advisor; Jennifer Shriber (EH), field advisor
2015 Liansai Dong (EH), chair; Marie Russell (EH), chair; Jennifer Stowell (EH), chair
2014 Qingyang Xiao (EH), chair; Kaytna Thaker (EH), chair
2013 Xueying Zhang (EPI), field advisor; Elizabeth Ervin (EH), chair; Christina Wu (EH), chair
Takahiro Goto (EH), chair
2012 Rahul Gondalia (EH), chair; Deanna Kristine Tollefson (EH), chair

Visiting PhD Students and Scholars

2019-2021 Kuo Zhang, Tsinghua University, China
2018-2019 Lin Wang, Institute of Urban Environment, Chinese Academy of Sciences, China
Tian Qiu, National Center for Environmental Health, Chinese CDC, China
2017-2018 Keyong Huang, Chinese Academy of Medical Sciences and Peking Union Medical College, China
Qiannan She, East China Normal University, China
2015-2016 Fengchao Liang, Peking University Health Science Center, China
2014-2015 Xia Meng, Fudan University, School of Public Health, China
2011-2013 Zongwei Ma, Nanjing University, School of Environment, China
2011-2013 Chao Yu, Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences
2009-2010 Zifeng Wang, Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences

SERVICE

Service to Emory University

Committee Participation

2019- RSPH Appointments, Promotion and Tenure (APT) Committee (member)
2019- Search Committee for the Chair of the Department of Environmental Health (member)
Search Committee for the Chair of the Department of Biostatistics and Bioinformatics (member)
2018- RSPH Computation and Data Science Advisory Group (member)
2018- RSPH Research Advisory Committee (member)
2015-2018 University Senate Committee on the Environment (member)
2013- 2018 RSPH Committee on Community and Diversity (member)
2010-2012 RSPH IT Advisory Committee (member)
2009-2018 RSPH Shepard Award Committee for Best Master's Thesis (member; chair, 2014)

Miscellaneous Talks

1. **Liu Y**. Air Quality Monitoring From Space: Local to Global. RSPH Public Health Grand Rounds. April 20, 2012.

Service to Profession

Editorial Board

2019- Associate editor, *Remote Sensing*
2018- Associate editor, *Frontiers in Public Health*
2016- Associate editor / Editorial board member, *Journal Of Exposure Science And Environmental Epidemiology*
2013-2017 Associate editor, *Frontiers in Environmental Science*
2016-2017 Guest editor, *Remote Sensing,* special issue on Remote Sensing of Atmospheric Pollution
2014-2015 Guest editor, *Advances in Meteorology*, special issue on Atmospheric Compositions: Satellite Observation and Applications on Air Quality and Climate Study

Expert Panel

2018- Member, Science Community Committee, A-CCP Mission Pre-formulation Study, NASA Earth Science Division
2014- Global Burden of Disease Expert, Ambient Particulate Matter Pollution
2013-2016 Scientific Steering Group member, WHO Department of Public Health and Environment, Global Platform on Air Quality and Health Project

Conference Organization

2019 Co-chair, Session 6. New Directions for Satellite Data: Applications in Health, Air Quality, Environmental Management, and Public Outreach. The 10th Conference on Environment and Health. American Meteorological Society 99th annual meeting. Jan 6 – 10, Phoenix, AZ.
2018 Co-chair, Session A077-I. New Directions for Open-Source Air Quality Data: Applications in Health, Air Quality, Environmental Management, and Public Outreach I. The AGU Fall meeting, December 10 – 14, Washington, DC.

2017 Co-chair, Session A110. Multi-sensor, Model, and Measurement Synergy: Regional-to-Global Aerosol Change Detection, and Observed Changes" and A21G. Multi-sensor, Model, and Measurement Synergy: Regional-to-Global Aerosol Change Detection, and Observed Changes II Posters". The AGU Fall meeting, December 11 – 15, New Orleans, Louisiana.

2017 Member, Technical Organizing Committee, ISES Annual Meeting, October 1-19, RTP, NC.

2013 Co-chair. Symposium Remote sensing approaches to estimate air pollution exposure for disease burden and epidemiology. The Conference of ISEE, ISES and ISIAQ, August 19 -24, Basel, Switzerland

2011 Co-chair. Symposium The applications of satellite remote sensing in air pollution exposure sciences and environmental health research and practice. The ISES 2011 annual meeting, October 23-27, 2011, Baltimore, MD.

Co-host. Pre-conference workshop Applications of Satellite Remote Sensing in Air Pollution Exposure Science. The ISES 2011 annual meeting, October 23-27, 2011, Baltimore, MD.

Peer Review Activities for Funding Agencies

2017 Ad hoc reviewer for NIH P01 proposals responding to RFA-ES-16-009: Centers for Oceans and Human Health 3: Impacts of Climate Change on Oceans and Great Lakes (COHH3)

2017 Ad hoc reviewer for the Health Effects Institute

2015 Ad hoc reviewer for the U.S. EPA RFA EPA-G2014-STAR-K1: Air Pollution Monitoring for Communities

2014 Ad hoc reviewer for the Health Effects Institute, and the National Science Foundation (AGS - GEO/ATM - Atmospheric Chemistry)

2014, 2015 Ad hoc reviewer for Environmental and Health Fund, Israel

2013 Ad hoc reviewer for the Special Emphasis Panel for NIH R21 proposals responding to "PAR-10-235: Climate Change and Health"

2012 Ad hoc reviewer for NIH R01 proposals responding to RFA-ES-11-013: the Centers for Oceans and Human Health, and the Oceans, Great Lakes, and Human Health

2010 Ad hoc reviewer for NASA Applied Science Program (ROSES 2010), the Canadian Natural Sciences and Engineering Research Council (NSERC) and the Canadian Institutes of Health Research (CIHR)

Peer Review Activities for Journals

Ad hoc reviewer for Aerosol and Air Quality Research; Air Quality, Atmosphere and Health; Atmospheric Chemistry and Physics; Atmospheric Environment; Atmospheric Pollution Research; Atmospheric Research; Atmospheric Science Letters; Egyptian Journal of Remote Sensing and Space Sciences; Environment International; Environmental Health; Environmental Health Perspectives; Environmental Research; Environmental Science and Technology; Epidemiology; Frontiers of Medicine; Geophysical Research Letters; International Journal of Health and Geographics; International Journal of Environmental Research and Public Health; Journal of Aerosol Science; Journal of Geophysical Research – Atmosphere; Journal of Applied Meteorology & Climatology; Journal of Applied Remote Sensing; Journal of Environmental Management; Journal of the Air & Waste Management Association; Remote Sensing; Nature Geoscience; Remote Sensing of Environment; Science; Science Bulletin; Science of the Total Environment; Scientific Reports.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS AND SOCIETIES

2012 – 2014 NASA Applied Remote SEnsing Training (*ARSET*), instructor
2008 – International Society of Exposure Science (ISES), member
2004 – American Geophysical Union (AGU), member
2010 – 2011 American Meteorological Society (AMS), member
2005 – 2006 American Association for Aerosol Research (AAAR), member
2007 NASA DEVELOP student team, Science Advisor
2007 – 2013 Earth & Sky, National Public Radio, Global Science Advisor