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EDUCATION

- 2004 Harvard University, Graduate School of Arts and Sciences
PhD, Environmental Sciences and Engineering (Advisors: Profs. Peter Rogers, Daniel Jacob, Petros Koutrakis)
- 1999 University of California at Davis
MS, Mechanical Engineering (Advisor: Prof. Ian Kennedy)
- 1997 Tsinghua University, China
BS, Environmental Sciences and Engineering (Advisors: Profs. Kebin He and Lixin Fu)

PROFESSIONAL EXPERIENCE

Academic Appointments

- 12/2020- Gangarosa Distinguished Professor and Chair, Gangarosa Department of Environmental Health (GDEH), Rollins School of Public Health (RSPH), Emory University, Atlanta, GA
- 5/2020- Professor, GDEH, RSPH, Emory University, Atlanta, GA
- 10/2019- Director, Emory Climate and Health Research Incubator
- 6/2014-4/2020 Associate Professor with Tenure, GDEH, RSPH, Emory University, Atlanta, GA
- 1/2009-5/2014 Assistant Professor, GDEH, RSPH, Emory University, Atlanta, GA
- 1/2008-12/2008 Research Associate, Harvard T.H. Chan School of Public Health, Boston, MA
- 8/2005-12/2007 Postdoctoral Research Fellow, Harvard T.H. Chan School of Public Health, Boston, MA
- 8/1999-2/2004 Graduate Research Assistant, Harvard John A. Paulson School of Engineering and Applied Sciences, Cambridge, MA
- 8/1998-7/1999 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® TechVenture Course, Emory University
- 2/2004-6/2005 Associate Consultant, ENVIRON International Corporation, Arlington, VA
- 05-07/2001 Intern, The World Bank Group, Washington, DC
- 7/1997-6/1998 Associate Consultant, Environmental Resources Management (ERM) Group, Beijing, China

HONORS, FELLOWSHIPS, AND AWARDS

- 2020 Georgia Research Alliance Distinguished Investigator
- 2019, 2020 Clarivate 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, 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

9/2020-6/2024 Cardiovascular health and exposure to PM2.5 constituents: a multi-cohort study (Grant # 1R01ES032140)
Funder: NIH
Goal: evaluate the associations of exposure to ambient PM2.5 constituents with both fatal and non-fatal CVD incidences in a retrospective multi-cohort study in China
Total Direct Costs: \$1,585,500

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: \$822,700
- 5/2018-4/2019 Evaluating Satellite-based PM_{2.5} Air Quality Models in Urban East Asia
Funder: Emory University Research Committee
Goal: transfer the satellite PM_{2.5} 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: \$39,800
- 5/2017-3/2018 Developing Advanced PM_{2.5} Exposure Models in Lima, Peru
Funder: The HERCULES Exposome Research Center
Goal: develop a machine learning model to estimate daily PM_{2.5} exposure in Lima at 1 km spatial resolution.
Total Direct Costs: \$35,000
- 8/2016-8/2021 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: \$459,000
- 6/2016-10/2026 Multi-Angle Imager for Aerosols (MAIA) instrument mission (Contract # 1558091)
Funder: NASA (Announcement of Opportunity NNX12ZDA006O-EV13)
Goal: design the next generation NASA aerosol sensor and investigate the association between the exposure to PM_{2.5} components with various health endpoints in world cities.
Total Emory Direct Costs: \$1,363,700
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: \$585,500
- 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: \$514,200
- 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: \$655,400
- 1/2009-6/2021 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: \$257,800
- 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
- 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: \$647,400
- 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: \$393,600
- 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: \$85,200
- 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: Lihua 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: Lihua 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: \$2,382,600
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: \$2,256,100
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: \$60,700
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: \$247,900
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 PM_{2.5} 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: \$20,100
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
 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: \$59,000
 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

PUBLICATIONS

Google Scholar citations (as of January 2021): 40467, h-index: 63, i10-index: 147.

Peer-Reviewed Articles (Student/postdoc first authors indicated with an asterisk)

1. Murray CJL, Aravkin AY, Zheng P, Abbafati C, Abbas KM, Abbasi-Kangevari M, et al. 2020. Global burden of 87 risk factors in 204 countries and territories, 1990–2019: A systematic analysis for the global burden of disease study 2019. *The Lancet*. 396:1223-1249. PMID: 33069327, PMCID: PMC7566194.
2. McNeill J, Snider G, Weagle C, Walsh B, Bissonnette P, Stone E, Abboud I, Akoshile C, Anh N, Balasubramanian R, Brook J, Coburn C, Cohen A, Dong J, Gagnon G, Garland R, He K, Holben B, Kahn R, Kim J, Lagrosas N, Lestari P, Liu Y, Jeba F, Joy K, Martins J, Misra A, Norford L, O'Neill N, Quel E, Salam A, Schichtel B, Tripathi S, Wang C, Zhang Q, Brauer M, Gibson M, Rudich Y, Martin R. Large Global Variations in Measured Airborne Metal Concentrations Driven by Anthropogenic Sources. *Sci Rep*. In press.
3. Meng X, Liu C, Zhang L, Wang W, Stowell J, Kan H, Liu Y. 2021. Estimating PM2.5 concentrations in Northeastern China with full spatiotemporal coverage, 2005-2016. *Remote Sens Environ*. 253:112203. (Co-Corresponding author)
4. Zhang T, Geng G, Liu Y, Chang H. Application of Bayesian Additive Regression Trees for Estimating Daily Concentrations of PM2.5 Components. *Atmosphere*. 11(11): 1233.
5. Kelly J, Jang C, Timin B, Di Q, Schwartz J, Liu Y, van Donkelaar A, Martin R, Berrocal V, and Bell M. Examining PM2.5 concentrations and exposure using multiple models. *Environ Res*. In press.
6. Cao Z, Lin S, Zhao F, Lv Y, Qu Y, Hu X, Yu S, Song S, Lu Y, Yan H, Liu Y, Ding L, Zhu Y, Liu L, Zhang M, Wang T, Zhang W, Fu H, Jin Y, Cai J, Zhang X, Yan X, Ji S, Zhang Z, Dai J, Zhu H, Gao L, Yang Y, Li C, Zhou J, Ying B, Zheng L, Kang Q, Hu J, Zhao W, Zhang M, Yu X, Wu B, Zheng T, Liu Y, Ryan P, Barr D, Qu W, Zheng Y, Shi X. Cohort Profile: China National Human Biomonitoring (China NHBM)—a nationally representative, prospective cohort in Chinese population. *Environ Int*. In press.
7. Murray C, and GBD 2019 Viewpoint Collaborators. 2020, Five insights from the Global Burden of Disease Study 2019, *The Lancet*, 396(10258), 1135-1159. PMID: 33069324.
8. Lee S, Kim M, Kim S, Lee D, Lee H, Kim J, Le S, Liu Y. Assessment of Long-range Transboundary Aerosols in Seoul, South Korea from Observations of Geostationary Ocean Color Imager (GOCI) and Ground-based Observations. *Environ Pollut*. In press.
9. Li G, Huang J, Wang J, Zhao M, Liu Y, Guo X, Wu S, Zhang L. Long-term exposure to ambient PM2.5 and increased risk of chronic kidney disease prevalence in China. *J Am Soc Nephrol*. In press.
10. Liang D, Shi L, Zhao J, Liu P, Schwartz J, Gao S, Sarnat J, Liu Y, Ebel S, Scovronick N, Chang H. 2020. Urban Air Pollution May Enhance COVID-19 Case-Fatality and Mortality Rates in the United States. *The Innovation*. 1(3): 100047. PMID: 32984861, PMCID: PMC7505160.
11. Watts N, Amann M, Arnell N, Ayeb-Karlsson S, Beagley J, Belesova K, Boykoff M, Byass P, Cai W, Campbell-Lendrum D, Capstick S, Chambers J, Coleman S, Costello A, Hsu S, Dalin C, Daly M, Dasandi N, Dasgupta S, Davies M, Napoli C, Dominguez-Salas P, Drummond P, Dubrow R, Ebi K, Eckelman M, Ekins P, Escobar L, Georgeson L, Golder S, Gong P, Grace D, Graham H, Hagggar P, Hamilton I, Hartinger S, Hess J, Hughes N, Jiminez M, Kelman I, Kennard H, Kiesewetter G, Kinney P, Kjellstrom T, Kniveton D, Lampard P, Lemke B, Liu Y, Liu Z, Lott M, Lowe R, Sewe M, Urtaza J, Maslin M, McAllister L, McGushin A, Mikhaylov S, McMichael C, Milner J, Montgomery H,

- Moradi-Lakeh M, Morrissey K, Murray K, Munzert S, Nilsson M, Neville T, Oreszczyn T, Otto M, Owfi F, Pearman O, Pencheon D, Quinn R, Rabhaniha M, Robinson; E, Rocklov J, Semenza J, Sherman J, Shi L, Springmann M, Shumake-Guillemot J, Tabatabaei M, Taylor J, Trinanés J, Vu B, Wilkinson P, Winning M. The 2020 Report of The Lancet Countdown on Health and Climate Change. *The Lancet*. In press.
12. Wang L, Bi J, Meng X, Geng G, Li J, Huang K, Tang L, Liu Y. 2020. Assessment of the long-term efficacy of PM2.5 pollution control policies across the Taiwan Strait. *Remote Sens Environ*. 251:112067. (Co-Corresponding author)
 13. Liang F, Xiao Q, Huang K, Yang X, Liu F, Li J, Lu X, Liu Y, Gu D. 2020. The 17-y spatiotemporal trend of PM2.5 and its mortality burden in China. *Proc Natl Acad Sci*. 201919641, doi:10.1073/pnas.1919641117. PMID: 32958653. (Co-Corresponding author)
 14. Sorek-Hamer M, Chatfield R, Liu Y. 2020. Review: Strategies for Using Satellite-based products in Modeling Short-Term Air Quality and Pollution Episodes. *Environ Int*. 144:106057. PMID: 32889481.
 15. Xiao Q, Liang F, Ning M, Zhang Q, Bi J, He K, Lei Y, Liu Y. 2021. The long-term trend of PM2.5-related mortality in China: The effects of source data selection. *Chemosphere*. 263: 127894. PMID: 32814138. (Co-Corresponding author)
 16. Bi J, D'Souza R, Rich D, Hopke P, Russell A, Liu Y, Chang H, Ebel S. 2020. Temporal changes in short-term associations between cardiorespiratory emergency department visits and PM2.5 in Los Angeles, 2005 to 2016. *Environ Res*. 190: 109967. PMID: 32810677.
 17. Li J, Huang J, Wang Y, Yin P, Wang L, Liu Y, Pan X, Zhou M, Li G. 2020. Years of life lost from ischaemic and haemorrhagic stroke related to ambient nitrogen dioxide exposure: A multicity study in China. *Ecotoxicol Environ Saf*. 203: 111018. PMID: 32888591.
 18. Li J, Lu X, 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, Zhu M, Liu Y, Shen H, Gu D. 2020. Chronic Effects of High Fine Particulate Matter Exposure on Lung Cancer in China. *Am J Respir Crit Care Med*. PMID: 32614242.
 19. Wang N, Mengersen K, Tong S, Kimlin M, Zhou M, Liu Y, Hu W. 2020. County-level variation in the association between PM2.5 and lung cancer mortality in China: an analysis using geographically weighted Poisson regression model. *Sci Total Environ*. 738:140195.
 20. 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. 2020. 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*. 54(11): 6812-6821. PMID: 32384243.
 21. 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. 2020. 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*. 54(11): 6540-6550. PMID: 32379428.
 22. Tapia V, Steenland K, Vu B, Liu Y, Vasquez V, Gonzales GF. 2020. PM2.5 exposure on daily cardio-respiratory mortality in Lima, Peru, from 2010 to 2016. *Environ Health*. 19(1):63. PMID: 32503633.
 23. Huang L and Liu Y. Nuclear risk communication: balanced news for long-term growth. 2020. *Nature Energy*. 5: 500-501.
 24. 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 Y, Kinney P, Liu Y, Mohegh A, Patz J, Pescador-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), e2020GH000270. PMID: 32642628, PMCID: PMC7334378.
 25. Liu R, Liu Y, Shao Y, Zhao W, Bi J, Ma Z. 2020. Spatiotemporal distributions of ground ozone levels in China from 2005 to 2017: a machine learning approach. *Environ Int*. 142: 105823. PMID: 32521347.
 26. 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)
 27. 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. PMID: 32402983.

28. 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.
29. Tapia V, Vasquez B, Vu B, Liu Y, Steenland K, Gonzales GF. 2020. Association between maternal exposure to particulate matter (PM_{2.5}) and adverse pregnancy outcomes in Lima, Peru. *J Expo Sci Env Epid.* 30: 689–697. PMID: 32355212.
30. 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 PM_{2.5} with mortality in Chinese adults: A pooled analysis of cohorts in the China-PAR project. *Environ Int.* 138: 105589. PMID: 32146266. (Co-corresponding author)
31. Geng G*, Meng X, He K, Liu Y. 2020. Random forest models for PM_{2.5} speciation concentrations using MISR fractional AODs. *Environ Res Lett.* 15:034056. (Corresponding author)
32. 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
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215. He K, Fu L, Hao J, Liu Y, Yang Z. 1996. Research on Motor Vehicle Exhaust Cleaning in China (In Chinese). *Advances in Environmental Science.* 4:62-69.
216. He K, Hao J, Fu L, Li M, Liu Y. 1996. The Status and Trend of Vehicle Pollution in China (In Chinese). *Huanjing Kexue.* 17:80-83.

Peer-reviewed Research Report

1. Paciorek C and Liu Y, Assessment and Statistical Modeling of the Relationship between Remotely-Sensed Aerosol Optical Depth and PM_{2.5} 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. Huang S, Li H, Wang M, Qian , Steenland K, Caudle W, Liu , Sarnat J, Papatheodorou S, Shi L. Long-term Exposure to Nitrogen Dioxide and Mortality: A Systematic Review and Meta-analysis. *Sci Total Environ.* Submitted.
2. Li Q, Zhu Q, Xu M, Zhao Y, Narayan V, Liu Y. Estimating the Impact of COVID-19 on the PM_{2.5} Levels in China with A Satellite-Driven Machine Learning Model. *Remote Sens.* Submitted.
3. Yang J, Liu M, Cheng Q, Yang L, Sun X, Kan H, Liu Y, Bell M, Yao H, Gao H, Gao Y. Investigating the impact of air pollution on cardiorespiratory diseases in the coastal city of Qingdao, China. *Sci Total Environ.* Submitted.
4. Yang X, Zhang L, Chen X, Liu F, Shan A, Liang F, Li X, Wu H, Yan M, Ma Z, Dong G, Liu Y, Chen J, Wang T, Zhao B, Liu Y, Gu D, Tang N. Long-term exposure to ambient PM_{2.5} and stroke mortality among urban residents in northern China. *Environ Res.* Submitted.
5. Kennedy C, Liu Y, Meng X, Strosnider H, Waller L, Zhou Y. Developing indices to identify hotspots of skin cancer vulnerability among the Non-Hispanic White population in the United States. *Annals of Epidemiology.* Submitted.
6. She Q, Cao S, Zhang S, Zhang J, Cai C, Meng X, Liu M, Liu Y. The impacts of comprehensive urbanization on PM_{2.5} concentrations in the Yangtze River Delta, China. *Ecological Indicators.* Submitted.
7. Bi J, Wallace L, Sarnat J, Liu Y. Characterizing Infiltration and Indoor Contribution of PM_{2.5} Based on Volunteer-Generated Monitoring Data at Large Spatial and Temporal Scales. *Environ Res.* Submitted.
8. 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. *One Earth.* Submitted.
9. Vu B, Tapia V, Ebelt S, Gonzales G, Liu Y, Steenland K. The association between asthma ED visits and satellite-derived PM_{2.5} in Lima, Peru. *Environ Res.* Submitted.

10. Wang L, Li Q, Qiu Q, Hou L, Huang S, Li J, Tang L, Liu Y. Assessing ecological risk induced by PM_{2.5} pollution in the Golden Triangle of Southern Fujian Province, China. *J Hazard Mater*. Submitted.
11. Li J, Huang J, Cao R, Yin P, Wang L, Liu Y, Pan X, Li G, Zhou M. Ozone and stroke years of life lost, 2013-2017: a retrospective 1 regression analysis in 48 Chinese big cities. *J Hazard Mater*. Submitted.
12. Huang S, Zhang X, Liu Z, Liang F, Li J, Huang K, Xiao Q, Yang X, Chen J, Liu X, Cao J, Chen S, Shen X, Yu L, Zhao Y, Wu X, Hu D, Huang J, Liu Y, Lu X, Liu F, Gu D. Long-Term Impacts of Ambient Fine Particulate Matter on Incident Overweight or Obesity: a Prospective Cohort study in Chinese Adults. *BMJ*. Submitted.
13. He M, Do V, Liu S, Kinney P, Fiore A, Jin X, DeFelice N, Bi J, Liu Y, Insaf T, Kioumourtoglou M. Short-term PM_{2.5} and cardiovascular admissions in NY State: assessing sensitivity to exposure model choice. *Environ Int*. Submitted.
14. 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.
15. 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.
16. 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. *PNAS*. Submitted.

PRESENTATIONS

Invited Presentations

1. Liu Y and Stowell J. Synergistic applications of new data and technology to characterize the health impact of smoke PM_{2.5}. **Wildland Fires: Towards Improved Understanding and Forecasting of Air Quality Impacts – A Workshop of The National Academies of Sciences, Engineering, and Medicine** (online). September 23 – 25, 2020.
2. Vu B, Bi J, Wang W, Huff A, Kondragunta S, Liu Y. GOES16-Based Estimation of Hourly PM_{2.5} Levels During the Camp Fire in California. **ISES 2020 Virtual Meeting**. September 20 – 21, 2020.
3. Diner D and Liu Y. Satellite aerosol products and PM_{2.5} - current state of the art. **CEOS Atmospheric Composition – Virtual Constellation AC-VC-16** (online). June 8 – 12, 2020.
4. Liu Y. Synergistic application of MAIA and TEMPO for air pollution and health effects. **MAIA-TEMPO Early Adopters Workshop** (online). May 18 – 19, 2020.
5. 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.
6. 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.
7. Bi J, Chang H, Wildani A, Liu Y. Applications of Satellite and Low-cost Sensor Data in Estimating PM_{2.5} 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.
8. Liu Y. Protecting Public Health from Space: the Past, Present, and Future. **2019 CDC Tracking Fall Recipient Workshop**, Atlanta, GA, September 4 – 6, 2019.
9. Geng G, Murray N, Chang H, Liu Y. Satellite-Based Daily PM_{2.5} Estimates during Fire Seasons in Colorado. **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018.
10. Liu Y, Meng X, Garay MJ, Diner DJ, Kalashnikova O, and Xu J. Estimating PM_{2.5} 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.

11. 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 PM_{2.5} and Public Health in Colorado. **American Geophysical Union Fall Meeting**. New Orleans, LA, December 11-15, 2017.
12. 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 PM_{2.5} exposure in Shanghai, China. **American Geophysical Union Fall Meeting**. New Orleans, LA, December 11-15, 2017.
13. 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.
14. Liu Y. Remote Sensing of PM Air Pollution, Exposure Modeling, and Health Effects. **The 27th Annual ISES Meeting**. Durham, NC, October 15 – 19, 2017.
15. Liu Y. Estimating PM_{2.5} Components Using Satellite Data and Introduction to MAIA. **The Desert Research Institute**. Reno, NV, September 14, 2017.
16. Liu Y. High-resolution characterization of PM_{2.5} 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.
17. Liu Y. Estimating PM_{2.5} 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.
18. 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.
19. Liu Y. The application of satellite-based PM_{2.5} exposure models in China. **The National Center for Cardiovascular Diseases of China**. Beijing, China, March 1, 2017.
20. Liu Y. Recent development of the applications of satellite remote sensing in PM_{2.5} retrieval. **China National Institute of Environmental Health Sciences**. Beijing, China, December 14, 2016.
21. Liu Y. The future of satellite remote sensing in retrieving PM_{2.5} in China. **The 1st China Eco-Development Forum**, Beijing, China, December 5 – 7, 2016.
22. 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.
23. 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.
24. Liu Y. Satellite Applications in the Monitoring and Modeling of Atmospheric Aerosols. **Second Suomi NPP Applications Workshop**, Huntsville, Alabama, November 18-20, 2014.
25. 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.
26. 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.
27. Liu Y. Satellite-Predicted High-Resolution PM_{2.5} Maps in the Southeastern U.S. **Work-In-Progress Webinar for the Clean Air Research Centers**, U.S. EPA. May 14, 2014
28. 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.
29. 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.
30. 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.

31. Liu Y. Enhancing EPHT with Satellite-Driven PM_{2.5} Exposure Modeling and Epidemiology. **URISA's Fourth GIS in Public Health Conference**, Miami, FL, June 17 - 20, 2013.
32. 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.
33. 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.
34. Liu Y. Estimating PM Population Exposure from Satellite Data, **Environmental Forum, Nanjing University, School of Environment**, China, December 22, 2011.
35. **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.
36. **Liu Y**, Hu X, and Waller L. Estimating Ground Level PM_{2.5} Concentrations in Atlanta Metro Area Using Spatial Statistical Models, **Goldschmidt2011**, Prague, Czech Republic, August 14-19, 2011.
37. Liu Y. Estimating PM Exposure with Satellite Remote Sensing. **HEI's 2011 Annual Conference**, Boston, MA, May 2, 2011.
38. 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.
39. **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.
40. 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.
41. 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.
42. Liu Y. Estimating PM_{2.5} Component Concentrations Using MISR Aerosol Microphysical Properties. **MISR Science Team Meeting**, Pasadena, CA, December 11, 2008.
43. 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.
44. **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.
45. **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.
46. **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.
47. 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.
48. 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.
49. 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.

50. 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.
51. 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. **Diner D**, Burke K, Pearson J, Boland S, Bruegge C, van Harten G, Jovanovic V, Hansen E, Bator L, Gluck S, Verhulst-Whitten K, Hasheminassab S, Martin R, Liu Y, Xu F, Wang J, and the MAIA Science and Investigation Team. MAIA: An Integrated Satellite, Surface Monitor, and Chemical Transport Model-Based System for Mapping Speciated Airborne Particulate Matter. The AGU Fall meeting (online). Dec 1 – 17, 2020.
2. **Bi J**, Wallace L, Sarnat J, Liu Y. Characterizing infiltration and indoor contribution of PM_{2.5} based on volunteer-generated monitoring data at large spatial and temporal scales. The AAAR 38th Annual Conference (online). October 5-9, 2020.
3. **Reuther P**, Geng G, Liu Y, Darrow L, Strickland M. Associations between satellite-derived estimates of PM_{2.5} species concentrations and birth weight in California. The ISEE 2020 Virtual Meeting.
4. **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.
5. **Bi J**, Wildani A, Chang H, Liu Y. Incorporating low-cost sensor measurements into high-resolution PM_{2.5} modeling in a large spatial scale (poster presentation). **The AGU Fall Meeting**. San Francisco, CA, December 9-13, 2019.
6. **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.
7. Huang K, Bi J, Meng X, Geng G, Wang Y, Lyapustin A, Kinney P, Lane K, **Liu Y**. Estimating PM_{2.5} 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.
8. She Q, Liu M, **Liu Y**. GOCI-Based Estimation of Hourly PM_{2.5} 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.
9. **Geng G**, Murray N, Tong D, Fu J, Hu X, Lee P, Meng X, Chang H, Liu Y. Satellite-based daily PM_{2.5} estimates during fire seasons in Colorado (Poster presentation). **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.
10. **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.
11. **Geng G**, Murray N, Chang H, Liu Y. The sensitivity of satellite-based PM_{2.5} estimates to its inputs: implications to model development in data-poor regions (Poster presentation). **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.
12. **Meng X**, Hand J, Schichtel B, Liu Y. Space-time trends of PM_{2.5} 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.
13. **Stowell J**, Strickland M, Chang H, Liu Y. Associations of Wildfire-specific PM_{2.5} Exposure on Cardiorespiratory Events in Colorado 2011-2014. **The AGU Fall Meeting**, Washington DC, Dec 10 – 14, 2018.
14. Huang K, Xiao Q, Meng X, Geng G, Wang Y, Lyapustin A, Liang F, Gu D, **Liu Y**. Predicting monthly high-resolution PM_{2.5} 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.

15. **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 PM_{2.5} 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.
16. **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.
17. **Xiao Q**, Chen H, Strickland M, Kan H, Chang H, Klein M, Yang C, Meng X, Liu Y. Associations between birth outcomes and maternal PM_{2.5} 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.
18. Xiao Q, Chang H, **Geng G**, Liu Y. An ensemble machine-learning model to predict historical PM_{2.5} 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)
19. **Vu B**, Bi J, Sánchez O, Steenland K, Liu Y. Developing advanced PM_{2.5} exposure models in Lima, Peru. **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018.
20. **Meng X**, Hand J, Schichtel B, Liu Y. Estimating concentrations of PM_{2.5} 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.
21. **Bi J**, Belle J, Wang Y, Lyapustin A, Wildani A, Liu Y. Incorporating Snow and Cloud Fractions in Random Forest To Estimate High Resolution PM_{2.5} Exposures In New York State. **The ISES-ISEE 2018 Joint Annual Meeting**, Ottawa, Canada, August 26 – 30, 2018.
22. **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.
23. **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.
24. **Liu Y.** Improving satellite-retrieved aerosol microphysical properties using GOCART Data. **ISES Annual Meeting**. Henderson, NV, October 18-22, 2015.
25. **Liu Y.** A High-Resolution Two-Stage Satellite Model to Estimate PM_{2.5} Concentrations in China. **AGU Fall Meeting**, San Francisco, CA, December 14-19, 2014.
26. **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.
27. **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.
28. **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.
29. **Liu Y.** SCAPE Report: Development of Satellite-driven PM_{2.5} Models in the Southeastern US. **U.S. EPA Clean Air Research Centers Annual Meeting**, Atlanta, GA. September 18-19, 2014.
30. **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.
31. 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.
32. 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.
33. Hu X, **Liu Y.** A Time Series Analysis of PM_{2.5} 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.

34. **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.
35. **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.
36. 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.
37. 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.
38. 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.
39. **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.
40. 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).
41. **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.
42. 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)
43. 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.
44. 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.
45. 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.
46. **Liu Y.** Enhancing Environmental Public Health Tracking With Satellite-driven Particle Exposure Modeling And Epidemiology, **The AMS Annual Meeting**, Atlanta, GA, January 19, 2010.
47. **Liu Y.** Estimating Particle Sulfate Concentrations Using MISR Aerosol Properties, **National Environmental Public Health Conference**, Atlanta, GA, October 26, 2009.
48. **Liu Y,** Schichtel B, Koutrakis P, Estimating SO4 Concentrations Using MISR Retrieved Aerosol Properties, **GEOS-Chem User Meeting**, Cambridge, MA, April 8, 2009.
49. **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.
50. **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.
51. **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.
52. 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.

53. **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.
54. **Liu Y**. A Fractional AOD Approach to Derive PM_{2.5} Information Using MISR Data Coupled with GEOS-CHEM Aerosol Simulation Results, **the 3rd GEOS-Chem User Meeting**, Cambridge, MA, April 11, 2007.
55. **Liu Y**, Kahn R, Turquety S, Yantosca R, Koutrakis P. Estimating PM_{2.5} Speciation and Size Distributions Using MISR Retrieved Aerosol Microphysical Properties, **MISR user science symposium**, Pasadena, CA, December 6, 2006.
56. 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.
57. **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.
58. **Liu Y**. Improving Ambient Fine Particle Pollution Monitoring with MISR Aerosol Product, **MISR Science Team meeting**, Pasadena, CA, December 7, 2004.
59. **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/RSPH. EH 586: Advanced Seminar in Climate Change and Health: Research and Policy (Course instructor)
Emory/RSPH. EH 590R: R-based quantitative data analysis for environmental health research (Course coordinator) |
| 2020 | Emory/RSPH. EH 586: Advanced Seminar in Climate Change and Health: Research and Policy (Course co-instructor)
Emory/RSPH. EH 501: Introduction to Environmental Health (Guest lecture)
Emory/RSPH. EH 510: Foundations of Exposure Science (Guest lecture)
Emory/RSPH. EH 582: Global Climate Change: Health Impacts and Response (Guest lecture) |
| 2019 | Emory/RSPH. EH 501: Introduction to Environmental Health (Guest lecture),
EH 510: Foundations of Exposure Science (Guest lecture) |
| 2018 | Emory/RSPH. EH 590R: Satellite remote sensing for health and environmental research (Course instructor) |
| 2017 -
2015 | Emory/RSPH. EH 590R: Intro to EH for EH masters students (Guest lecture)
Emory/RSPH. EH 540: Environmental Hazards I (Course instructor)
Emory/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/RSPH. EH587: Introduction to Satellite Remote Sensing of the Environment and Its Applications in Public Health (Course instructor). |
| 2013 | Emory/RSPH. EH515: Air Quality in the Urban Environment: A Survey of Research methods and Recent Findings (Guest lecture) |
| 2013- | Emory/RSPH. HLTH38-EH590: Genome, Exposome, and Health (Guest lecture) |
| 2011- | Emory/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/RSPH. EH 590R: Environmental Health Journal Club (Guest lecture) |
| 2009 | Emory/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 Yun Hang (2020 -)
- Completed Jennifer Stowell (2020 - 2021), Xia Meng (2016-2019), Guannan Geng (2017-2019), Xuefei Hu (2011-2017), Cindy Young (2013-2015), Youngmin Kim (2012-2014), Shenshen Li (2011-2014)

Doctoral Dissertation Committees

- Active Wenhao Wang (GDEH, RSPH, Emory), pre-candidacy faculty advisor
 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 PM_{2.5} 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 PM_{2.5} 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)

- 2019-2020 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- 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 Research Letters; 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; IEEE Transactions on Geoscience and Remote Sensing; 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; Pediatric Research, Remote Sensing; Nature Geoscience; Nature Human Behavior; 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