Curriculum Vitae

Yang Liu, PhD

Department of Environmental Health
Emory University, Rollins School of Public Health
1518 Clifton Road NE, CNR Bldg. 7011
Atlanta, GA 30322

yang.liu@emory.edu
Tel: (404) 7272131
Fax: (404) 7278744

EDUCATION

2004 Harvard University, PhD, Environmental Sciences and Engineering
1999 University of California at Davis, MS, Mechanical Engineering
1997 Tsinghua University, China, BS, Environmental Sciences and Engineering

PROFESSIONAL EXPERIENCE

Academic Appointments

5/2023-4/2026 Adjunct Professor, School of Civil and Environmental Engineering, Georgia Tech, Atlanta, GA

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

11/2018-10/2021 Adjunct Professor, the National Institute of Environmental Health, Chinese Center for Disease Control and Prevention

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

2022 Strategic Leadership Program for Department Chairs, the Chronicle of Higher Education
2019 Atlanta Society of Mentors (ASOM) faculty mentoring workshop, Emory University
2017 Kauffman FastTrac® TechVenture Course, Emory University
2/2004-6/2005 Associate Consultant, ENVIRON International Corporation, Arlington, VA
5/2001-7/2001 Intern, The World Bank Group, Washington, DC
7/1997-6/1998 Associate Consultant, Environmental Resources Management (ERM) Group, Beijing, China

HONORS, FELLOWSHIPS, AND AWARDS

2023 Recipient, American Geophysical Union Geohealth Section Award
2020 - Georgia Research Alliance Distinguished Investigator
2019 - 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
9/2017-8/2021 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
2016-2018	Oriental Scholar, Fudan University, Shanghai, 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

9/2023-8/2026 Climate & Health Actionable Research and Translation Center (Grant # 1P20ES036110)
Funder: NIH
Goal: to establish Emory Climate & Health Actionable Research and Translation (CHART) Center to advance and translate research on climate risks to protect the health of under-resourced urban populations.
Direct Costs: $2,513,157

9/2022-8/2025 Advancing climate change research, teaching, outreach and practice at Emory
Funder: Office of the Provost, Emory University
Goal: to explore options to support the long-term growth of Emory's climate change research, teaching, outreach, and practice
Direct Costs: $324,100

8/2022-4/2027 The impact of wildfire smoke exposure on cardiovascular health in the western US (Grant # 1R01ES034175)
Funder: NIH
Goal: to quantify the relationships between acute and chronic exposure to wildfire smoke and CVD outcomes in the Western US, and estimate future smoke-related CVD burden due to climate change
Total Costs: $2,899,700

5/2021-12/2024 Georgia Climate Project
Funder: Ray C. Anderson Foundation
Goal: Advancing stronger conversations, solutions, and science of climate change in Georgia
Total costs: $300,000

2/2021-1/2025 NASA ROSES 2020 Solicitation A.38: HAQAST3: Using Earth Observations to Support National and Global Environmental Health Research and Surveillance (Grant # 80NSSC21K0507)
Funder: NASA
Goal: to translate knowledge in applied research using satellite remote sensing data to various federal agencies, professional societies, and global public health initiatives.
Total Direct Costs: $341,600

9/2020-6/2024 Cardiovascular health and exposure to PM2.5 constituents: a multi-cohort study (Grant # 5R01ES032140)
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

10/2019-9/2023 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

11/2018-9/2023 NASA ROSES 2017 Solicitation A.39: 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: $805,109

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: $39,800

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

8/2016-8/2021 NASA ROSES 2015 Solicitation A.46: HAQAST2: 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 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: $1,363,700
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)
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 ROSES 2009 Solicitation A.32 – HAQAST1: 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

1/2009-2/2024 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

10/2022-9/2027 Acquisition of ground-based remote sensing measurement networks for STEM research and research education in Spelman College (Grant # 80NSSC23K0028)
Funder: NASA
Goal: to acquire a Pandora spectrometer system and an Aeronet instrument to enhance STEM (Science, Technology, Engineering, and Mathematics) research and research education in Spelman College, a historically black college for women.
Principal Investigator: Guanyu Huang (Spelman College)
Total costs: $588,808
Role: Co-investigator (2% effort)

9/2022-8/2023 Using NASA Earth Observations to Support Environmental Justice Communities in Atlanta, Georgia
Funder: NASA
Principal Investigator: Yun Hang (Emory University)
Total costs: $142,179
Role: Co-investigator (2.5% effort, in-kind support)

9/2022-8/2025 Building Resilience in Atlanta: Leveraging Community Knowledge to Understand and Map the health impacts of cumulative environmental exposures and social vulnerability in the context of climate change (Grant # 84048501)
Funder: EPA
Goal: to understand how the cumulative health impact of chemical and non-chemical exposures is exacerbated by climate change among the most vulnerable communities in Atlanta.
Total Costs: $1,349,998
Principal Investigators: Saria Hassan & Eri Saikawa
Role: Co-investigator (2.5% effort)

9/2021-6/2025 Air Pollution and Alzheimer's Disease and Related Dementias: A National Study (Grant # 1R01AG074357)
Funder: NIH
Goal: to better quantify health effects of air pollution exposures on Alzheimer’s disease and related dementias (AD/ADRD), using Medicare Chronic Conditions Data Warehouse, and high-resolution exposures predicted from machine learning.
Total Direct Costs: $2,574,000
Principal Investigator: Liuhua Shi (Emory University)
Role: Co-investigator (7.5% effort)

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: $2,382,600
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 NASA ROSES 2013 Solicitation A.29: Evaluate and Enhance Suomi NPP Products for Air Quality and Public Health Applications (Grant # NNX15AC28A)
Funder: NASA
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 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: $20,100
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: Unfunded 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: Unfunded collaborator

PUBLICATIONS

Google Scholar citations (as of March 2024): 96408, h-index: 92, i10-index: 223.
NIH iCite Mean RCR: 6.42
ORCID: 0000-0001-5477-2186
Peer-Reviewed Articles (Student/postdoc first authors indicated with an asterisk)

1. Liu X, Turner J, Oxford C, McNeill J, Walsh B, Le Roy E, Weagle C, Stone E, Zhu H, Liu W, Wei Z, Hyslop N, Giacomo J, Dillner A, Salam A, Hossen A, Islam Z, Abboud I, Akoshile C, Amador-Muñoz O, Anh N, Asfaw A, Balasubramanian R, Chang R, Coburn C, Dey S, Diner D, Dong J, Farrah T, Gahungu P, Garland R, Grutter M, Hasheminassab S, John J, Kim J, Kim J, Langerman K, Lee P, Lestari P, Liu Y, Mamo T, Martins M, Mayol O, Naidoo M, Park S, Schechner Y, Schofield R, Tripathi S, Windwer E, Wu M, Zhang Q, Brauer M, Rudich Y, Martin R. Elemental characterization of ambient particulate matter for a globally distributed monitoring network: methodology and implications. *Environ Sci Technol Air*. In press.
2. Kim E, Kim B, Kim H, Liu Y, Kang Y, Jacob D, Kim Y, Woo J, Kim J, Wang S, Yoo C, Bae C, Kim S. North Korean CO Emissions Reconstruction Using DMZ Ground Observations, TROPOMI Space-Borne Data, and the CMAQ Air Quality Model. *Sci Total Environ*. In press.
3. Jin Z*, Pu Q, Janechek N, Zhang H, Wang J, Chang H, Liu Y. 2024. A MAIA-like modeling framework to estimate PM2.5 mass and speciation concentrations with uncertainty. *Remote Sense Environ*. 303:113995. (Corresponding author)
4. Zhu Q*, Zhang D, Wang W, D'Souza R, Zhang H, Steenland K, Scovronick N, Ebelt S, Chang H, Liu Y. 2024. Wildfires are Associated with Increased Emergency Department (ED) Visits for Anxiety Disorders in the Western United States. *Nature Mental Health*. https://doi.org/10.1038/s44220-024-00210-8. (Corresponding author)
5. Hang Y*, Meng X, Xi Y, Zhang D, Lin X, Liang F, Tian H, Li T, Wang T, Cao J, Fu Q, Dey S, Li S, Huang K, Kan H, Shi X, Liu Y. 2023. Atmospheric elemental carbon pollution and its regional health disparities in China. *Environ Res Lett*. 18:124017. (Co-Corresponding author)

6. Katoch V, Kumar A, Imam F, Sarkar D, Knibbs L, Liu Y, Ganguly D, Dey S. 2023. Addressing biases in ambient PM2.5 exposure and associated health burden estimates by filling satellite AOD retrieval gaps over India. *Environ Sci Technol*. 57(48): 19190–19201. PMID: 37956255.
7. Zhang A, Wang Q, Yang X, Liu Y, He J, Shan A, Sun N, Zhang A, Liu Q, Yao B, Liang F, Yang Z, Yan X, Bo S, Liu Y, Mao H, Tang N, Yan H. 2023. Impacts of heatwaves and cold spells on glaucoma in rural China: a national cross-sectional study. *Environ Sci Pollut Res*. 30: 47248–47261. PMID: 36737565, PMCID: PMC10097786.
8. Zhang D*, Wang W, Xi Y, Bi J, Hang Y, Zhu Q, Pu Q, Chang H, Liu Y. 2023. Wildland fires worsened population exposure to PM2.5 pollution in the Continental United States. *Environ Sci Technol*. 57(48): 19990–19998. DOI: 10.1021/acs.est.3c05143. (Corresponding author)
9. Huang K, Jia J, Liang F, Li J, Niu X, Yang X, Chen S, Cao J, Shen C, Liu X, Yu L, Lu F, Wu X, Zhao L, Li Y, Hu D, Huang J, Liu Y, Gu D, Liu F, Lu X. 2024. Fine particulate matter exposure, genetic susceptibility, and the risk of incident stroke: a prospective cohort study. *Stroke*. 55 (1): 92-100. PMID: 38018834.
10. Kim E, Kim H, Kim B, Woo J, Liu Y, Kim S. 2024. Development of surface observation-based two-step emissions adjustment and its application on CO, NOx, and SO2 emissions in China and South Korea. *Sci Total Environ*. 907: 167818. PMID: 37858815.
11. Wang Y, Zhao Y, Liu Y, Jiang Y, Zheng B, Xing J, Liu Y, Wang S, Nielsen C. 2023. Sustained emission reductions have restrained the ozone pollution over China. *Nat Geosci*. 16:967-974.
12. Romanello M, Napoli C, Green C, Kennard H, Lampard P, Scamman D, Walawender M, Ali Z, Ameli N, Ayeb-Karlsson S, Beggs P, Belesova K, Ford L, Bowen K, Cai W, Callaghan M, Campbell-Lendrum D, Chambers J, Cross T, Dalin C, Dasandi N, Dasgupta S, Davies M, Dominguez-Salas P, Drummond P, Dubrow R, Ebi K, Eckelman M, Ekins P, Freyberg C, Gasparyan O, Gordon-Strachan G, Graham H, Gunther S, Hamilton I, Hang Y, Hänninen R, Hartinger S, He K, Hess J, Hsu S, Jamart L, Jankin S, Jay O, Kelman I, Kiesewetter G, Kinney P, Kniveton D, Kouznetsov R, Larosa F, Lee J, Lemke B, Liu Y, Liu Z, Lott, M, Batista M, Lowe R, Martinez-Urtaza J, Maslin M, McAllister L, McGushin A, McMichael C, Mi Z, Milner J, Minor K, Minx J, Mohajeri N, Momen N, Moradi-Lakeh M, Morrissey K, Munzert S, Murray K, Neville T, Nilsson M, Obradovich N, Sewe M, O'Hare M, Oliveira C, Oreszczyn T, Otto M, Owfi F, Pearman O, Pega F, Perishing A, Rabbaniha M, Rickman J Robinson E, Röcklov J, Salas R, Semenza J, Sherman J, Shumake-Guillemot J, Silbert G, Sofiev M, Springmann M, Stowell J, Tabatabaei M, Taylor J, Thompson R, Tonne C, Treskova M; Joaquin A. Triñanes J, van Daalen K, Wagner F, Warnecke L, Winning M, Wyns A, Yglesias-González M, Zhang S, Zhang Y, Zhu Q, Gong P, Montgomery H, Costello A. 2023. The 2023 Report of The Lancet Countdown on Health and Climate Change. *The Lancet*. 402(10419):2346-2394. PMID: 37977174.
13. Sun D, Liu C, Ding Y, Yu C, Guo Y, Sun D, Pang Y, Pei P, Du H, Yang L, Chen Y, Meng X, Liu Y, Liu J, Sohoni R, Sansome G, Chen J, Chen Z, Lv J, Kan H, Li L. 2023. Long-term exposure to ambient PM2.5, active commuting, and farming activity and cardiovascular disease risk in adults in China: a prospective cohort study. *The Lancet Planet Health*. 7(4):e304-e312. PMID: 37019571, PMCID: PMC10104773.
14. Yuan C, Liu F, Huang K, Shen C, Li J, Liang F, Yang X, Cao J, Chen S, Hu D, Huang J, Liu Y, Lu X, Gu D. 2023. Association of Long-Term Exposure to Ambient Fine Particulate Matter with Atherosclerotic Cardiovascular Disease Incidence Varies across Populations with Different Predicted Risks: The China-PAR Project. *Environ Sci Technol.* 57(27): 9934-9942. PMID: 37368969.
15. Gupta S*, Bi J, Liu Y, Wildani A. 2023. Boosting for regression transfer via importance sampling. *Int J Data Sci Anal*. https://doi.org/10.1007/s41060-023-00414-8.
16. He J, Liu Y, Zhang A, Liu Q, Yang X, Sun N, Yao B, Liang F, Yan X, Liu Y, Mao H, Chen X, Tang N, Yan H. 2023. Joint effects of meteorological factors and PM2.5 on age-related macular degeneration: a national cross-sectional study in China. *Environ Health Prev Med*. 28:3. PMID: 36631073, PMCID: PMC9845061.
17. George P, Mallis A, Zhu Y, Liu Y, Lane P, Lam W, Lipscomb J, Ebelt S. 2023. Are children with sickle cell disease at particular risk from the harmful effects of air pollution? Evidence from a large, urban/peri-urban cohort. *Pediatr Blood Cancer*. Article e30453. PMID: 37248172.
18. Huang K, Zhu Q, Lu X, Gu D, Liu Y. 2023. Long-term spatiotemporal trends in ambient NO2 concentrations and attributable health burdens in China from 2005 to 2020. *Geohealth*. 7(5):e2023GH000798. PMID: 37206379, PMCID: PMC10190124. (Co-Corresponding author)

19. Zhang D*, Xi Y, Boffa D, Liu Y, Nogueira L. 2023. Association of Wildfire Exposure While Recovering From Lung Cancer Surgery With Overall Survival. *JAMA Oncology*. 9(9):1214-1220. PMID: 37498574, PMCID: PMC10375383.

20. Sun D, Liu C, Ding Y, Yu C, Guo Y, Sun D, Pang Y, Pei P, Du H, Yang L, Chen Y, Meng X, Liu Y, Liu J, Sohoni R, Sansome S, Chen J, Chen Z, Lv J, Kan H, Li L. 2023. Long-term exposure to fine particulate matter and incidence of esophageal cancer: a prospective study of 0.5 million Chinese adults. *Gastroenterology*. 165(1):61-70.e5. PMID: 37059339.

21. Meng X*, Hang Y*, Li T, Lin X, Wang T, Cao J, Fu Q, Dey S, Huang K, Liang F, Kan H, Shi X, Liu Y. 2023. A satellite-driven model to estimate long-term particulate sulfate levels and attributable mortality burden in China. *Environ Int*. 171: Article No. 107740. PMID: 36634483, PMCID: PMC9985485 (Corresponding author)

22. Di Napoli C, Romanello M, Minor K, Chambers J, Dasgupta S, Escobar L, Hang Y, Hanninen R, Liu Y, Batista M, Lowe R, Murray K, Owfi F, Rabbaniha M, Shi L, Sofiev M, Tabatabaei M, Robinson E. 2023. The role of global reanalyses in climate services for health: insights from the Lancet Countdown. *Meteorological Applications*. 30:e2122.

23. Yuan X, Liang F, Zhu J, Huang K, Dai L, Li X, Wang Y, Li Q, Lu X, Huang J, Liao L, Liu Y, Gu D, Liu H, Liu F. 2023. Maternal Exposure to PM2.5 and the Risk of Congenital Heart Defects in 1.4 million births: A Nationwide Surveillance-based Study. *Circulation*. 147(7): 565-574. PMID: 36780386, PMCID: PMC9988362.

24. Lee H, Liu Y, Chatfield R. 2023. Neighborhood-scale ambient NO2 concentrations using TROPOMI NO2 data: Applications for spatially comprehensive exposure assessment. *Sci Total Environ*. 857: Article No. 159342. PMID: 36223808.

25. Di Napoli C, McGushin A, Romanello M, Ayeb-Karlsson S, Cai W, Chambers J, Dasgupta S, Escobar L, Kelman I, Kjellstrom T, Kniveton D, Liu Y, Liu Z, Lowe R, Martinez-Urtaza J, McMichael C, Moradi-Lakeh M, Murray K, Rabbaniha M, Semenza J, Shi L, Tabatabaei M, Trinanes J, Vu B, Brimicombe C, Robinson E. 2022. Tracking the impacts of climate change on human health via indicators: lessons from the Lancet Countdown. *BMC Public Health*, 22: Article No. 663. PMID: 35387618, PMCID: PMC8985369.

26. Romanello M, Di Napoli C, Drummond P, Green C, Kennard H, Lampard P, Scamman D, Arnell N, Ayeb-Karlsson S, Ford L, Belesova L, Bowen K, Cai W, Callaghan M, Campbell-Lendrum D, Chambers J, van Daalen K, Dalin C, Dasandi N, Dasgupta S, Davies M, Dominguez-Salas P, Dubrow R, Ebi K, Eckelman M, Ekins P, Escobar L, Georgeson L, Graham H, Gunther S, Hamilton I, Hang Y, Hänninen R, Hartinger S, He K, Hess J, Hsu S, Jankin S, Jamart L, Jay O, Kelman I, Kiesewetter G, Kinney P, Kjellstrom T, Kniveton D, Lee J, Lemke B, Liu Y, Liu Z, Lott M, Batista M, Lowe R, MacGuire F, Sewe M, Martinez-Urtaza J, Maslin M, McAllister L, McGushin A, McMichael C, Mi Z, Milner J, Minor K, Minx J, Mohajeri N, Moradi-Lakeh M, Morrissey K, Munzert S, Murray K, Neville T, Nilsson M, Obradovich N, O'Hare M, Oreszczyn T, Otto M, Owfi F, Pearman O, Rabbaniha M, Robinson E, Rocklöv J, Salas R, Semenza J, Sherman J, Shi L, Shumake-Guillemot J, Silbert G, Sofiev M, Springmann M, Stowell J, Tabatabaei M, Taylor J, Triñanes J, Wagner F, Wilkinson P, Winning M, Yglesias-González M, Zhang S, Gong P, Montgomery H, Costello A. 2022. The 2022 report of the lancet countdown on health and climate change: Health at the mercy of fossil fuels. *The Lancet*, 400(10363):1619-1654. PMID: 36306815.

27. Hu K, Keenan K, Hale J, Kulu H, Liu Y. 2023. A longitudinal analysis of the association between long-term exposure to air pollution and cognitive function among adults aged 45 and over in China. *J Gerontol B Psychol Sci Soc Sci*. 78(3):556-569. PMID: 36215221.

28. Liu C, Cha K, Lv J, Lam H, Newell K, Meng X, Liu Y, Chen R, Kartsonaki C, Wright N, Du H, Yang L, Chen Y, Guo Y, Pei P, Yu C, Shen H, Wu T, Kan H, Chen Z, Li L. 2022. Long-term exposure to ambient fine particulate matter and incidence of major cardiovascular diseases: a prospective study of 0.5 million adults in China. *Environ Sci Technol*. PMID: 36044001, PMCID: PMC9494741.

29. Wang L, Li Q, Qiu Q, Hou L, Huang S, Li J, Tang L, Liu Y. 2022. Assessing the ecological risk induced by PM2. 5 pollution in a fast developing urban agglomeration of southeastern China. *J Environ Manage*. 324:116284. PMID: 36162318. (Co-corresponding author)

30. Yan M, Ge H, Zhang L, Chen X, Yang X, Liu F, Shan A, Liang F, Li X, Ma Z, Liu H, Pang J, Dong G, Liu Y, Chen J, Wang T, Zhao B, Zeng Q, Lu X, Liu Y, Tang N. 2022. Long-term PM2.5 exposure in association with chronic respiratory diseases morbidity: a cohort study in Northern China. *Ecotox Environ Safe*. 244:114025. PMID: 36049332, PMCID: PMC10380089.

31. Pruthi D*, Liu Y. 2022. Low-cost nature-inspired deep learning system for PM2.5 forecast over Delhi, India. *Environ Int*. 166: 107373. PMID: 35763992. (Corresponding author)
32. Wu Z, Liang F, Chen X, Liu G, Li G, Tian L, Guo Q, Yang C, Zhou Z, Pan X, Liu Y. 2022. Hospital Admission Risks and Ambient Fine Particulate Matter Exposure in Beijing, China. *Atmos Environ*. Article No. 119291. (Co-corresponding author)
33. Hang Y*, Meng X, Li T, Wang T, Cao J, Fu Q, Li S, Huang K, Liang F, Kan H, Shi X, Liu Y. 2022. Assessment of long-term particulate nitrate air pollution and its health risk in China. *iScience*. 25:104899. (Corresponding author)
34. Wu Y, Zhang T, Ye Z, van der Kuijp J, Sun X, Han G, Zhao Y, Globe R, Huang L, Liu Y. 2022. Public anxiety through various stages of COVID-19 coping: Evidence from China. *PloS One*. 17(6):e0270229. PMID: 35709292, PMCID: PMC9202924. (Co-corresponding author)
35. Jiang C*, Wang W, Du L, Huang G, McConaghy C, Fineman S, Liu Y. 2022. Field Evaluation of an Automated Pollen Sensor. *Int J Environ Res Public Health*. 19:6444. PMID: 35682029, PMCID: PMC9179988 . (Corresponding author)
36. Liu Q, Huang K, Liang F, Yang X, Li J, Chen J, Liu X, Cao J, Shen C, Yu L, Zhao Y, Deng Y, Li Y, Hu D, Lu X, Liu Y, Gu D, Liu F, Huang J. 2022. Long-Term Exposure to Fine Particulate Matter Modifies the Association Between Physical Activity and Hypertension Incidence. *J Sport Health Sci*. 11:708-715. PMID: 35065296, PMCID: PMC9729921.
37. Hu K, Keenan K, Hale J, Liu Y, Kulu H. 2022. A longitudinal analysis of PM2.5 exposure and multimorbidity clusters and accumulation among adults aged 45-85 in China. *PLOS Global Public Health*. 2(6):e0000520. PMID: 36962462.
38. Napoli C, McGushin A, Romanello M, Ayeb-Karlsson S, Cai W, Chambers J, Dasgupta S, Escobar L, Kelman I, Kjellstrom T, Kniveton D, Liu Y, Liu Z, Lowe R, Martinez-Urtaza J, McMichael C, Moradi-Lakeh M, Murray K, Rabbaniha M, Semenza J, Shi L, Tabatabaei M, Trinanes J, Vu B, Brimicombe C, Robinson E. 2022. Tracking the impacts of climate change on human health via indicators: lessons from the Lancet Countdown. *BMC Public Health*. 22:article number 663. PMID: 35387618, PMCID: PMC8985369.
39. Yang C, Fu J, Liu Y, Dong X, Liu Y. 2022. Projections of future wildfires impacts on air pollutants and air toxics in a changing climate over the western United States. *Environ Pollut*. 304: 119213. PMID: 35351594.
40. Yang L, Yang J, Liu M, Sun X, Li T, Guo Y, Hu K, Bell M, Cheng Q, Kan H, Liu Y, Gao H, Yao X, Gao Y. 2022. Nonlinear effect of air pollution on adult pneumonia hospital visits in the coastal city of Qingdao, China. *Environ Res.* 209: 112754. PMID: 35074347.
41. Gladson L, Garcia N, Bi J, Liu Y, Lee H, Cromar K. 2022. Evaluating the Utility of High-Resolution Spatiotemporal Air Pollution Data in Estimating Local PM2.5 Exposures in 92 California Cities from 2015-2018. *Atmos*. 13:85.
42. Vu B*, Bi J, Wang W, Huff A, Kondragunta S, Liu Y. 2022. Application of geostationary satellite and high-resolution meteorology data in estimating hourly PM2.5 levels during the Camp Fire episode in California. *Remote Sen Environ*. 271:112890. PMID: 37033879, PMCID: PMC10081518. (Corresponding author)
43. Bi J*, Knowland E, Keller C, Liu Y. 2022. Combining machine learning and numerical simulation for high-resolution PM2.5 concentration forecast. *Environ Sci Technol*. 56:1544-1556. PMID: 35019267. (Corresponding author)
44. Zhao Y, Xi M, Zhang Q, Dong Z, Ma M, Zhou K, Xu W, Xing J, Zheng B, Wen Z, Liu X, Nielsen C, Liu Y, Pan Y, Zhang L. Decline in bulk deposition of air pollutants in China lags behind reductions in emissions. 2022. *Nat Geosci*. 15:190-195.
45. Zhu Q*, Bi J, Liu X, Li S, Wang W, Zhao Y, Liu Y. 2022. Satellite-based long-term spatiotemporal patterns of surface ozone concentrations in China: 2005-2019. *Environ Health Perspect*. 130(2): 027004. PMID: 35138921, PMCID: PMC8827621. (Corresponding author)
46. Liao J*, Liu Y, Steenland K, Pillarisetti A, Thompson L, Dey S, Balakrishnan K, Clasen T. 2022. Child Survival and Early Lifetime Exposures to Ambient Fine Particulate Matter in India: A Retrospective Cohort Study. *Environ Health Perspect*. 130(1): 017009. PMID: 35080433, PMCID: PMC8791069. (Co-corresponding author)
47. Ma Z, Dey S, Chrisopher S, Liu R, Bi J, Balyan P, Liu Y. 2022. A review of statistical methods used for developing large-scale and long-term PM2.5 models from satellite data. *Remote Sen Environ*. 269: 112827. (Co-corresponding author)
48. Stowell J*, Geng G, Yang C, Fu J, Scovronick N, Strickland M, Liu Y. 2022. Asthma exacerbation due to climate change-induced wildfire smoke in the Western US. *Environ Res Lett*. 17:014023. (Corresponding author)

49. Wang W*, Liu X, Bi J, Liu Y. 2022. A machine learning model to estimate ground ozone concentrations in California using TROPOMI data and high-resolution meteorology. *Environ Int*. 158: 106917. PMID: 34624589. (Corresponding author)

50. Wang Y, Xiao S, Zhang Y, Chang H, Martin R, Van Donkelaar A, Gaskins A, Liu Y, Liu P, Shi L. 2022. Long-term exposure to PM2.5 major components and mortality in the southeastern United States. *Environ Int*. 158:106969. PMID: 34741960.

51. Jin Z, Ma Y, Chu L, Liu Y, Dubrow R, Chen K. 2022. Predicting spatiotemporally-resolved air temperature over Sweden from satellite data using an ensemble model. *Environ Res*. 204:111960. PMID: 34464620.

52. Liu Y, Liu Y, Fu J, Yang C, Dong X, Tian H, Tao B, Yang J, Wang Y, Zou Y, Ke Z. 2021. Projection of future wildfire emissions in the western United States under climate change: contributions from changes in wildfire, fuel loading, and fuel moisture. *Int J Wildland Fire*. 31(1): 1-13.

53. Romanello M, McGushin A, Di Napoli C, Drummond P, Hughes N, Jamart L, Kennard H, Lampard P, Rodriguez B, Arnell N, Ayeb-Karlsson S, Belesova K, Cai W, Campbell-Lendrum D, Capstick S, Chambers J, Chu L, Ciampi L, Dalin C, Dasandi N, Dasgupta S, Davies M, Dominguez-Salas P, Dubrow R, Ebi K, Eckelman M, Ekins P, Escobar L, Georgeson L, Grace D, Graham H, Gunther S, Hartinger S, He K, Heaviside C, Hess J, Hsu S, Jankin S, Jimenez M, Kelman I, Kiesewetter G, Kinney P, Kjellstrom T, Kniveton D, Lee J, Lemke B, Liu Y, Liu Z, Lott M, Lowe R, Martinez-Urtaza J, Maslin M, McAllister L, McMichael C, Mi Z, Milner J, Minor K, Mohajeri N, Moradi-Lakeh M, Morrissey K, Munzert S, Murray K, Neville T, Nilsson M, Obradovich N, Sewe M, Oreszczyn T, Otto M, Owfi F, Pearman O, Rabbaniha M, Robinson E, Rocklöv J, Salas R, Semenza J, Sherman J, Shi L, Springmann M, Tabatabaei M, Taylor J, Trinanes J, Shumake-Guillemot J, Vu B, Wagner F, Wilkinson P, Winning M, Yglesias M, Zhang S, Gong P, Montgomery H, Costello A, Hamilton I. 2021. The 2021 Report of The Lancet Countdown on Health and Climate Change. *The Lancet*. 398 (10311): 1619 – 1662. PMID: 34687662.

54. Yang X, Yang Z, Liu Y, Chen X, Yao B, Liang F, Shan A, Liu F, Chen S, Yan X, Huang J, Bo S, Liu Y, Tang N, Gu D, Yan H. 2021. The association between long-term exposure to ambient fine particulate matter and glaucoma: A nation-wide epidemiological study among Chinese adults. Int J Hyg Environ Health. 238: 113858. PMID: 34634756.

55. She Q*, Cao S, Zhang S, Zhang J, Cai C, Meng X, Liu M, Liu Y. 2021. The impacts of comprehensive urbanization on PM2.5 concentrations in the Yangtze River Delta, China. *Ecol Indic*. 132: 108337. (Corresponding author)

56. Qian Y, Li Q, Sarnat J, Papatheodorou S, Schwartz J, Liang D, Liu Y, Shi L. 2021. Long-term exposure to low-level NO2 and mortality among the elderly population in the southeastern US. *Environ Health Perspect*. 129 (12): 127009.

57. Zhang D*, Du L*, Wang W, Zhu Q, Bi J, Scovronick N, Naidoo M, Garland B, Liu Y. 2021. A machine learning model to estimate ambient PM2.5 concentrations in industrialized highveld region of South Africa. *Remote Sen Environ*. 266:112713. PMID: 34776543, PMCID: PMC8589277. (Corresponding author)

58. Liu S, Tian H, Bai X, Zhu C, Wu B, Luo L, Hao Y, Liu W, Lin S, Zhao S, Wang K, Liu K, Zhang Q, Zhang K, Kan H, Liu Y, Cheng K, Wang Y, Gao J, Hua S, Guo Z, Lv Y, Hao J. 2021. Significant but spatiotemporal–heterogeneous health risks caused by airborne exposure to multiple toxic trace elements in China. *Environ Sci Technol*. 55(19): 12818–12830.

59. Lin Y, Yang X, Liang F, Huang K, Liu F, Li J, 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, Lu X, Liu Y, Gu D. 2021. Benefits of active commuting on cardiovascular health and life expectancy modified by ambient levels of fine particulate matter: A prospective cohort study. *Ecotoxicol Environ Saf*. 224:112641. PMID: 34461320. PMCID: PMC9188394.

60. Yang J, Liu M, Cheng Q, Yang L, Sun X, Kan H, Liu Y, Bell M, Yao H, Gao H, Gao Y. 2022. Investigating the impact of air pollution on cardiorespiratory diseases in the coastal city of Qingdao, China. *Front Environ Sci Eng*. 16 (5): article No. 56.

61. He M, Do V, Liu S, Kinney P, Fiore A, Jin X, DeFelice N, Bi J, Liu Y, Insaf T, Kioumourtzoglou M. 2021. Short-term PM2.5 and cardiovascular admissions in NY State: assessing sensitivity to exposure model choice. *Environ Health*. 20:93. PMID: 34425829, PMCID: PMC8383435.

62. Li J, Huang J, Cao R, Yin P, Wang L, Liu Y, Pan X, Li G, Zhou M. 2021. The association between ozone and years of life lost from stroke, 2013–2017: A retrospective regression analysis in 48 major Chinese cities. *J Hazard Mater*. 405: 124220. PMID: 33092875.

63. Huang S, Zhang X, Liu Z, Liang F, Li J, Huang K, Yang X, Chen J, Liu X, Cao J, Chen S, Shen C, Yu L, Zhao Y, Deng Y, Hu D, Huang J, Liu Y, Lu X, Liu F, Gu D. 2021. Long-Term Impacts of Ambient Fine Particulate Matter Exposure on Overweight or Obesity in Chinese Adults: The China-PAR Project. *Environ Res*. 201: 111611. PMID: 34217719.

64. Vu B*, Tapia V, Ebelt S, Gonzales G, Liu Y, Steenland K. 2021. The association between asthma ED visits and satellite-derived PM2.5 in Lima, Peru. *Environ Res*. 199: 111226. PMID: 33957138.

65. Wallace L, Bi J, Ott W, Sarnat J, Liu Y. 2021. Calibration of low-cost PurpleAir outdoor monitors using an improved method of calculating PM2.5. *Atmos Environ*. 256:118432.

66. Kennedy C, Liu Y, Meng X, Strosnider H, Waller L, Zhou Y. 2021. Developing indices to identify hotspots of skin cancer vulnerability among the Non-Hispanic White population in the United States. *Annals of Epidemiology*. 59:64-71. PMID: 33895246.

67. Li Q*, Zhu Q, Xu M, Zhao Y, Narayan V, Liu Y. 2021. Estimating the Impact of COVID-19 on the PM2.5 Levels in China with A Satellite-Driven Machine Learning Model. *Remote Sens*. 13:1351. (Corresponding author)

68. Holloway T, Miller D, Anenberg S, Diao M, Duncan B, Fiore A, Henze D, Hess J, Kinney P, Liu Y, Neu J, O'Neill S, Odman T, Pierce R, Russell A, Tong D, West J, Zondlo M. 2021. Satellite Monitoring for Air Quality and Health. *Annu. Rev. Biomed. Data Sci*. 4:1, 417-447. PMID: 34465183.

69. 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. 2021. Long-term exposure to ambient PM2.5 and stroke mortality among urban residents in northern China. *Ecotoxicol Environ Saf*. 213:112063. PMID: 33636465.

70. Bi J*, Wallace L, Sarnat J, Liu Y. 2021. Characterizing ourdoor infiltration and indoor contribution of PM2.5 with citizen-based low-cost monitoring data. *Environ Pollut*. 276:116763. PMID: 33631689. (Corresponding author)

71. Huang S, Li H, Wang M, Qian Y, Steenland K, Caudle W, Liu Y, Sarnat J, Papatheodorou S, Shi L. 2021. Long-term Exposure to Nitrogen Dioxide and Mortality: A Systematic Review and Meta-analysis. *Sci Total Environ*. 776:145968. PMID: 33640547.

72. Kianian B, Liu Y, Chang H. 2021. Imputing satellite-derived aerosol optical depth using a multi-resolution spatial model and random forest for PM2.5 prediction. *Remote Sens*. 13:126.

73. 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.

74. 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.

75. 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. 2020. Large Global Variations in Measured Airborne Metal Concentrations Driven by Anthropogenic Sources. *Sci Rep*. 10:21817. PMID: 33311638, PMCID: PMC7733447.

76. 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. PMID: 34548700, PMCID: PMC8452239. (Co-Corresponding author)

77. Zhang T, Geng G, Liu Y, Chang H. 2020. Application of Bayesian Additive Regression Trees for Estimating Daily Concentrations of PM2.5 Components. *Atmosphere*. 11(11): 1233. PMID: 34322279, PMCID: PMC8315111.

78. Kelly J, Jang C, Timin B, Di Q, Schwartz J, Liu Y, van Donkelaar A, Martin R, Berrocal V, and Bell M. 2021. Examining PM2.5 concentrations and exposure using multiple models. *Environ Res*. 196:110432. PMID: 33166538.

79. 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. 2021. Cohort Profile: China National Human Biomonitoring (CNHBM)—a nationally representative, prospective cohort in Chinese population. *Environ Int*. 146:106252. PMID: 33242729, PMCID: PMC7828642.

80. 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.

81. Lee S, Kim M, Kim S, Lee D, Lee H, Kim J, Le S, Liu Y. 2021. Assessment of Long-range Transboundary Aerosols in Seoul, South Korea from Observations of Geostationary Ocean Color Imager (GOCI) and Ground-based Observations. *Environ Pollut*. 269:115924. PMID: 33221083.

82. Li G, Huang J, Wang J, Zhao M, Liu Y, Guo X, Wu S, Zhang L. 2021. Long-term exposure to ambient PM2.5 and increased risk of CKD prevalence in China. *J Am Soc Nephrol*. 32(2): 448-458. PMID: 33334736.

83. Liang D, Shi L, Zhao J, Liu P, Schwartz J, Gao S, Sarnat J, Liu Y, Ebelt 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.

84. 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, Haggar 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, Rabbaniha M, Robinson; E, Rocklov J, Semenza J, Sherman J, Shi L, Springmann M, Shumake-Guillemot J, Tabatabei M, Taylor J, Trinanes J, Vu B, Wilkinson P, Winning M. 2020. The 2020 Report of The Lancet Countdown on Health and Climate Change: responding to converging crises. *The Lancet*. 397 (10269):129-170. PMID: 33278345.

85. 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)

86. 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)

87. 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.

88. 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)

89. Bi J*, D'Souza R, Rich D, Hopke P, Russell A, Liu Y, Chang H, Ebelt 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.

90. 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.

91. 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.

92. 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.

93. 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.

94. 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.

95. 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.

96. Huang L and Liu Y. Nuclear risk communication: balanced news for long-term growth. 2020. *Nature Energy*. 5: 500-501.

97. 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.

98. 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.

99. Stowell J*, Bi J, Al-Hamdan M, Lee H, Lee S, Freedman F, Kinney P, Liu Y. 2020. Estimating PM2.5 in Southern California using satellite data: factors that affect model performance. *Environ Res Lett*. 15:094004. (Corresponding author)

100. 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.

101. 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.

102. Tapia V, Vasquez B, Vu B, Liu Y, Steenland K, Gonzales GF. 2020. Association between maternal exposure to particulate matter (PM2.5) and adverse pregnancy outcomes in Lima, Peru. *J Expo Sci Env Epid*. 30: 689–697. PMID: 32355212.

103. 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)

104. 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)

105. 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

106. 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)

107. 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.

108. 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.

109. 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.

110. 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)

111. 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.

112. 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.

113. 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.

114. 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)

115. 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.

116. 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*. 30: 680–688. PMID: 31745179.

117. 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. PMID: 31520956. (Corresponding author)

118. 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. PMID: 31494323. (Co-corresponding author)

119. 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. PMID: 32380602. (Corresponding author)

120. 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.

121. 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. *J Environ Public Health*. Article ID 6127845, 8 pages. PMID: 31428166, PMCID: PMC6681625.

122. 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.

123. 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. PMID: 31251382, PMCID: PMC6604100.

124. 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).

125. 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.

126. 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. PMID: 31176908. (Co-corresponding author)

127. 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. PMID: 31226517.

128. 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. 2019. 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.

129. 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.

130. Archer-Nicholls S, Lowe D, Lacey F, Kumar R, Xiao Q, Liu Y, Carter E, Baumgartner J, Wiedinmyer C. 2019. Radiative Effects of Residential Sector Emissions in China: Sensitivity to Uncertainty in Black Carbon Emissions. *J Geophy Res - Atmos*. 124(9): 5029-5044.

131. Geng G*, Xiao Q, Zheng Y, Tong D, Zhang Q, Zhang X, He K, and Liu Y. 2019. Recent changes in PM2.5 chemical composition in China during 2013–2017 and its relationship to the Air Pollution Prevention and Control Action Plan. *Sci. China Earth Sci.* 62:1872. (Co-corresponding author)

132. Vu B*, Sánchez O, Bi J, Xiao Q, Hansel N, Checkley W, Steenland K, Liu Y. 2019. Developing an advanced PM2.5 exposure model in Lima, Peru. *Remote Sen*. 11: 641. PMID: 31372305, PMCID: PMC6671674. (Corresponding author)

133. Huang K*, Yang X, Liang F, Liu F, Li J, Xiao Q, Chen J, Liu X, Cao J, Shen C, Yu L, Lu F, Wu J, Zhao L, Wu X, Li Y, Hu D, Huang J, Liu Y, Lu X, Gu D. 2019. Long-term exposure to fine particulate matter and hypertension incidence in China. *Hypertension*. 73:1195-1201. PMID: 31067193. (Co-corresponding author)

134. 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, Gu D. 2019. Long-term Exposure to Ambient Fine Particulate Matter and Incidence of Diabetes in China: A Cohort Study. *Environ Int*. 126: 568 - 575. PMID: 30852444. (Co-corresponding author)

135. Li T, Guo Y, Liu Y, Wang J, Xiao Q, Wang Q, Sun Z, He M, Shi X. 2019. Estimating mortality burden attributable to short-term PM2.5 exposure: A national observational study in China. *Environ Int*. 125: 245-251.

136. Zhang H, Wang J, Castro L, Zeng J, Liu Y, Krotkov N. 2019. Surface erythemal UV irradiance in the continental United States derived from ground-based and OMI observations: quality assessment, trend analysis and sampling issues. *Atmos Chem Phys*. 19: 2165 - 1281.

137. Bi J*, Belle J, Wang Y, Lyapustin A, Wildani A, Liu Y. 2019. Impacts of snow and cloud covers on satellite-derived PM2.5 concentrations. *Remote Sens Environ*. 221: 665-674. (Corresponding author)

138. Xiao Q*, Chang H, Geng G, Liu Y. 2018. An ensemble machine-learning model to predict historical PM2.5 concentrations in China from satellite data. *Environ Sci Technol*. 52 (22): 13260-13269. PMID: 30354085. (Corresponding author)

139. Meng X*, Hand J, Schichtel B, Liu Y. 2018. Space-time trends of PM2.5 constituents in the Conterminous United States estimated by a machine learning approach, 2005-2015. *Environ Int.* 121(2): 1137-1147. PMID: 30413295. (Corresponding author)

140. Huang J, Li G,Liu Y, Huang J, Xu G, Qian X, Cen Z, Pan X, Xu A, Guo X, He T. 2018. Projections for temperature-related years of life lost from cardiovascular diseases in the elderly in a Chinese city with typical subtropical climate. *Environ Res*. 167: 614-621.

141. GBD 2017 SDG Collaborators. 2018. Measuring progress from 1990 to 2017 and projecting attainment to 2030 of the health-related sustainable development goals for 195 countries and territories: A systematic analysis for the global burden of disease study 2017. *The Lancet*. 392:2091-2138.

142. GBD 2017 Causes of Death Collaborators. 2018. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. 392:1736-1788.

143. Strosnider H*, Chang H, Darrow L, Liu Y, Vaidyanathan A, Strickland M. 2019. Age-specific associations of ozone and PM2.5 with respiratory emergency department visits in the US. *Am J Respir Crit Care Med*. 199, (7), 882-890. PubMed: 30277796.

144. Geng G*, Murray N, Chang H, Liu Y. 2018. The sensitivity of satellite-based PM2.5 estimates to its inputs: implications to model development in data-poor regions. *Environ Int*. 121: 550-560. PMID: 30300813. (Corresponding author)

145. Weagle C, Snider G, Li C, van Donkelaar A, Philip S, Bissonnette P, Burke J, Jackson J, Latimer R, Stone E, Abboud I, Akoshile C, Anh N, Brook J, Cohen A, Dong J, Gibson M, Griffith D, He K, Holben B, Kahn R, Keller C, Kim J, Lagrosas N, Lestari P, Lik Khain Y, Liu Y, Marais E, Martins J, Misra A, Muliane U, Pratiwi R, Quel E, Salam A, Segev L, Tripathi S, Wang C, Zhang Q, Brauer M, Rudich Y, Martin R. 2018. Global Sources of Fine Particulate Matter: Interpretation of PM2.5 Chemical Composition Observed by SPARTAN using a Global Chemical Transport Model. *Environ Sci Technol.* 52:11670-11681. PMID: 30215246.

146. Zhou Q, Yang J, Liu M Liu Y, Sarnat S, Bi J. 2018. Air Pollution-Related Health Risks Attributable to China's Municipal Solid Waste Incineration. *Environ Sci Technol*. 52: 11490-11499. PMID: 30234980.

147. Wang Y*, Hu X, Chang H, Waller L, Belle J, Liu Y. 2018. A Bayesian Downscaler Model to Estimate Daily PM2.5 levels in the Continental U.S. *Int. J. Environ. Res. Public Health*. 15(9), 1999. PMID: 30217060, PMCID: PMC6164266 (Corresponding author).

148. Gao M, Beig G, Song S, Zhang H, Hu J, Ying Q, Liang F, Liu Y, Wang H, Lu X, Zhu T, Carmichael G, Nielsen C, McElroy M. 2018. The Impact of Power Generation Emissions on Ambient PM2.5 Pollution and Human Health in China and India. *Environ Int*. 121(1): 250-259. PMID: 30223201.

149. Li T, Zhang Y, Wang J, Xu D, Yin Z; Che H, Lv Y, Luo J, Zeng Y, Liu Y, Kinney P, Shi X. 2018. All-cause mortality risk associated with long-term exposure to ambient $PM_{2\cdot5}$ in China: a cohort study. *The Lancet Public Health*. 3:e470-77. PMID: 30314593.

150. Geng G*, Murray N, Tongf D, Fu J, Hu X, Lee P, Meng X, Chang H, Liu Y. Satellite-based daily PM2.5 estimates during fire season in Colorado. 2018. *J Geophy Res - Atmos*. 123:8159-8171. (Corresponding author)

151. Gao M , Ji D , Liang F, Liu Y. 2018. Attribution of Aerosol Direct Radiative Forcing in China and India to Emitting Sectors. *Atmos Environ*. 190: 35-42.

152. Huang K*, Xiao Q, Meng X, Geng G, Wang Y, Lyapustin A, Gu D, Liu Y. 2018. Predicting monthly high-resolution PM2.5 concentrations with random forest model in the North China Plain. *Environ Pollut*. 242: 675-683. PMID: 30025341. (Corresponding author)

153. Shaddick G, Thomas M, Amini H, Broday D, Cohen A, Frostad J, Green A, Gumy S, Liu Y, Martin R, Prüss-Üstün A, Simpson D, van Donkelaar A, Brauer M. 2018. Data integration for the assessment of population exposure to ambient air pollution for global burden of disease assessment. *Environ Sci Technol*. 52 (16), pp 9069–9078. PMID: 29957991.

154. Liang F*, Xiao Q, Gu D, Xu M, Tian L, Guo Q, Wu Z, Pan X, Liu Y. 2018. Satellite-based short- and long-term exposure to PM2.5 and adult mortality in urban Beijing, China. *Environ Pollution*. 242: 492-499. PMID: 30005261. (Corresponding author)

155. Diner D, Brauer M, Bruegge C, Burke K, Chipman R, Di Girolamo L, Garay M, Hasheminassab S, Hyer E, Jerrett M, Jovanovic V, Kalashnikova O, Liu Y, Lyapustin A, Martin R, Nastan A, Ostro B, Ritz B, Schwartz J, Wang J, Xu F. 2018. Advances in multiangle satellite remote sensing of speciated airborne particulate matter and association with adverse health effects: from MISR to MAIA. *J Appl Rem Sens*. 12(4) 042603.

156. Sánchez-Ccoyllo O, Ordoñez-Aquino C, Muñoz Á, Llacza A, Andrade M, Liu Y, Reátegui-Romero W, Brasseur G. 2018. Modeling study of the particulate matter in lima with the wrf-chem model: case study of April 2016. *Int J Appl Eng Res*. 13(11): 10129-10141.

157. Huang L, Chen J, Zhou Y, Hammitt J, Lu X, Bi J, Liu Y. 2018. The changing risk perception towards nuclear power in China after the Fukushima Nuclear Accident. *Energy Policy*. 120: 294–301.

158. Xiao Q*, Chen H, Strickland M, Kan H, Chang H, Klein M, Yang C, Meng X, Liu Y. 2018. Associations between birth outcomes and maternal PM2.5 exposure in Shanghai: a comparison of three exposure assessment approaches. *Environ Int*. 117:226-236. PMID: 29763818 PMCID: PMC6091210. (Corresponding author)

159. Meng X*, Garay M, Diner D, Xu J, Liu Y. 2018. Estimating PM2.5 speciation concentrations using prototype 4.4 km-resolution MISR aerosol properties over Southern California. *Atmos Environ*. 181:70-81. PMID: 30546266. PMCID: PMC6288801. (Corresponding author)

160. Grantham N, Reich B, Liu Y, and Chang H. Spatial Regression with an Informatively-Missing Covariate. 2018. *Envirometrics*. 29(4), e2499.

161. Li G, Guo Q, Liu Y, Li Y, Pan X. 2018. Projected Temperature-Related Years of Life Lost From Stroke Due To Global Warming in a Temperate Climate City, Asia: Disease Burden Caused by Future Climate Change. *Stroke*. 49:828-834. PMID: 29523649.

162. Khalili R, Bartell S, Hu X, Liu Y, Chang H, Belanoff C, Strickland M, Vieira V. 2018. Early-life Exposure to PM2.5 and Risk of Acute Asthma Clinical Encounters among Children in Massachusetts: A Case-Crossover Analysis. *Environ Health*. 17:20. PMID: 29466982. PMCID: PMC5822480.

163. Rudd M, Moore A, Rochberg D, Bianchi-Fossati L, Brown M, D'Onofrio D, Furman D, Garcia J, Jordan B, Kline J, Risse L, Yager P, Abbinett J, Alber M, Bell J, Bhedwar C, Cobb K, Cohen J, Cox M, Dormer M, Dunkley N, Farley H, Gambill J, Goldstein M, Harris G, Hopkinson M, James J, Kidd S, Knox P, Liu Y, Matisoff D, Meyer M, Mitchem J, Moore K, Ono A, Philipsborn J, Sendall K, Shafiei F, Shepherd M, Teebken J, Worley A. 2018. Climate research priorities for policy-makers, practitioners, and scientists in Georgia, USA. *Environ Manage*. 62:190-209. PMID: 29796704, PMCID: PMC6060861.

164. Huang L, Yang Q, Li J, Chen J, Chen K, Dong S, Liu Y. 2017. Risk Perception of Heat Waves and Its Spatial Variation in Nanjing, China. *Int J Biometeorol*. 62(5): 783-794. PMID: 29335771.

165. Belle J*, H. Chang, Y. Wang, X. Hu, A. Lyapustin, Liu Y. 2017. The potential impact of satellite-retrieved cloud parameters on ground-level PM2.5 mass and composition. *Int J Environ Res Public Health*. 14(10), 1244; doi:10.3390/ijerph14101244. PMID: 29057838, PMCID: PMC5664745. (Corresponding author)

166. Liang F*, Xiao Q, Wang Y, Lyapustin A, Li G, Gu D, Pan X, Liu Y. MAIAC-based Long-term Spatiotemporal Trends of PM2.5 in Beijing, China. 2018. *Sci Total Environ*. 616-617:1589-1598. PMID: 29055576. (Corresponding author)

167. Huang R, Zhai X, Ivey C, Friberg M, Hu X, Liu Y, Di Q, Schwartz J, Mulholland J, Russell A. 2018. Air Pollutant Exposure Field Modeling Using Air Quality Model-Data Fusion Methods, and Comparison with Satellite AOD-derived Fields: Application over North Carolina, USA. *Air Qual Atmos Health*. 11:11-22.

168. Girguis M, Strickland M, Hu X, Liu Y, Chang H, Kloog I, Belanoff C, Bartell S, Vieira V. 2018. Exposure to Acute Air Pollution and Risk of Bronchiolitis and Otitis Media for Preterm and Term Infants. *J Expo Sci Environ Epidemiol*. 28(4): 348-357. PMID: 29269754 PMCID: PMC6013343.

169. Naghavi M, Abajobir AA, Abbafati C, Abbas KM, Abd-Allah F, Abera SF, et al. 2017. Global, regional, and national age-sex specific mortality for 264 causes of death, 1980-2016: A systematic analysis for the global burden of disease study 2016. *The Lancet*, 390:1151-1210. PMID: 28919116, PMCID: PMC5605883.

170. Hay SI, Abajobir AA, Abate KH, Abbafati C, Abbas KM, Abd-Allah F, et al. 2017. Global, regional, and national disability-adjusted life-years (DALYS) for 333 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990-2016: A systematic analysis for the global burden of disease study 2016. *The Lancet,* 390:1260-1344. PMID: 28919118 PMCID: PMC5605707.

171. Chang H, Sarnat S, Liu Y. 2017. Projecting Health Impacts of Climate Change: Embracing an Uncertain Future. *Chance*. 30:55-61.

172. Lin T, Zeng Q, Dong W, Guo Q, Wu Z, Pan X, Li G, Liu Y. 2017. Addressing the source contribution of PM2.5 on mortality: an evaluation study of its impacts on excess mortality in China. *Environ Res Lett*. 12:104016.

173. Stowell J*, Kim Y, Gao Y, Fu J, Chang H, Liu Y. 2017. The impact of climate change and emissions control on future ozone levels: implications for human health. *Environ Int*. 108: 41-50. PMID: 28800413. (Corresponding author)

174. Xiao Q*, Wang Y, Chang H, Meng X, Geng G, Lyapustin A, Liu Y. 2017. Full-coverage high-resolution daily PM2.5 estimation using MAIAC AOD in the Yangtze River Delta of China. *Remote Sens Environ*. 199:437-446. (Corresponding author)

175. Abajobir AA, Abbafati C, Abbas KM, Abd-Allah F, Abera SF, Aboyans V, et al. 2017. Global, regional, and national age-sex specific mortality for 264 causes of death, 1980-2016: A systematic analysis for the global burden of disease study 2016. *The Lancet*. 390:1151-1210. PMID: 28919116 PMCID: PMC5605883.

176. Holben B, Kim J, Sano I, Mukai S, Eck T, Giles D, Schafer J, Sinyuk A, Slutsker I, Smirnov A, Sorokin M, Anderson B, Che H, Choi M, Crawford J, Ferrare R, Garay M, Jeong U, Kim M, Kim W, Knox N, Li Z, Lim H, Liu Y, Maring H, Nakata M, Pickering K, Piketh S, Redemann J, Reid J, Salinas S, Seo S, Tan F, Tripathi S, Toon O, Xiao Q. 2017. An overview of meso-scale aerosol processes, comparison and validation studies from DRAGON networks. *Atmos Chem Phys*. 18:655-671.

177. Liang F*, Lin T, Guo Q, Westerdahl D, Liu Y, Jin X, Li G, Pan X. 2017. Short-term Health Effects of PM2.5 and Black Carbon during Heavy Haze Events: A Case Study in Beijing, China. *Int J Environ Res Public Health*. 14(7), 725; doi:10.3390/ijerph14070725.

178. Vos T, Abajobir AA, Abate KH, Abbafati C, Abbas KM, Abd-Allah F, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990-2016: A systematic analysis for the global burden of disease study 2016. *The Lancet*, 390:1211-1259. PMID: 28919117, PMCID: PMC5605509.

179. Yu W, Liu Y, Ma Z, Bi J. 2017. Improving satellite-based PM2.5 estimates in China using Gaussian processes modeling in a Bayesian hierarchical setting. *Sci Rep*. 7(1):7048. PMID: 28765549, PMCID: PMC5539114.

180. Girguis MS, Strickland MJ, Hu X, Liu Y, Chang HH, Belanoff C, Bartell S, Vieira V. 2017. Chronic PM2.5 Exposure and Risk of Infant Bronchiolitis and Otitis Media Clinical Encounters. *Int J Hyg Environ Health*. 220:1055-1063. PMID: 28701289 PMCID: PMC5558860.

181. Liang F*, Gao M, Xiao Q, Carmichael GR, Pan X, Liu Y. 2017. Evaluation of a Data Fusion Approach to Estimate Daily PM2.5 Levels in North China. *Environ Res*. 158:54-60. PMID: 28599195, PMCID: PMC5612782. (Corresponding author)

182. Huang L, Rao C, Kuijp T, Bi J, Liu Y. 2017. A comparison of individual exposure, perception, and acceptable levels of PM2.5 with air pollution policy objectives in China. *Environ Res*. 157:78-86. PMID: 28525860.

183. Larkin A, Geddes JA, Martin RV, Xiao Q, Liu Y, Marshall JD, Brauer M, Hystad P. 2017. A Global Land Use Regression Model for Nitrogen Dioxide Air Pollution. *Environ Sci Technol*. 51(12):6957-6964. PMID: 28520422 PMCID: PMC5565206.

184. Hu X*, Belle JH, Meng X, Wildani A, Waller LA, Strickland MJ, Liu Y. 2017. Estimating PM2.5 Concentrations in the Conterminous United States Using the Random Forest Approach. *Environ Sci Technol*. 51: 6936-6944, PMID: 28534414. (Corresponding author)

185. Liu M, Huang Y, Jin Z, Ma Z, Liu X, Zhang B, Liu Y, Yu Y, Wang J, Bi J, Kinney P. 2017. The nexus between urbanization and PM2.5 related mortality in China. *Environ Pol*. 227:15-23. PMID: 28454017.

186. Cohen A, Brauer M, Burnett R, Anderson H, Estep K, Frostad J, Brunekreef B, Dandona L, Dandona R, Feigin V, Freedman G, Hubbell B, Kan H, Knibbs L, Liu Y, Martin R, Morawska L, Pope C, Shin H, Straif K, Dingenen K, van Donkelaar A, Vos T, Murray C, Forouzanfar M. 2017. Estimates and 25-year trends of the global burden of disease attributable to ambient air pollution: an analysis of data from the Global Burden of Diseases Study 2015. *The Lancet*. 389:1907-1918. PMID: 28408086 PMCID: PMC5439030.

187. Shaddick G, Thomas ML, Green A, Brauer M, van Donkelaar A, Burnett R, Chang H, Cohen A, Dingenen R, Dora C, Gumy S, Liu Y, Martin R, Waller L, West J, Zidek J, Prüss-Ustün A. 2017. Data Integration Model for Air Quality: A Hierarchical Approach to the Global Estimation of Exposures to Ambient Air Pollution. *J. R. Stat. Soc. C.* doi:10.1111/rssc.12227.

188. Liu C, Chen R, Zhao Y, Ma Z , Bi J, Liu Y, Meng X, Wang Y, Chen X. 2017. Associations between ambient fine particulate air pollution and hypertension: a nationwide cross-sectional study in China. *Sci Total Environ*. 584–585:869-874. PMID: 28153400.

189. Zhou Y, Gilboa S, Herdt M, Lupo P, Flanders W, Liu Y, Shin M, Canfield M, Kirby R. 2017. Maternal exposure to ozone and PM2.5 and the prevalence of orofacial clefts in four U.S. states. *Environ Res*. 153:35-40. PMID: 27888746 PMCID: PMC5612445.

190. Liu M, Huang Y, Ma Z, Jin Z, Liu X, Wang H, Liu Y, Wang J, Jantunen M, Bi J, Kinney P. 2017. Spatial and temporal trends in the mortality burden of air pollution in China: 2004–2012. *Environ Int*. 98:75-81. PMID: 27745948 PMCID: PMC5479577.

191. Liu Y and Diner DJ. 2017. Multi-Angle Imager for Aerosols: a satellite investigation to benefit public health. *Public Health Rep*. 132(1): 14-17.

192. Xiao Q*, Liu Y, Mulholland J, Russell A, Darrow L, Tolbert P, Strickland M. 2016. Pediatric Emergency Department Visits and Ambient Air Pollution in the U.S. State of Georgia: A Case-Crossover Study. *Environ Health*. 15:115. PMID: 27887621 , PMCID: PMC5124302. (Corresponding author)

193. Belle J* and Liu Y. 2016. Evaluation of Aqua MODIS collection 6 AOD parameters for air quality research over the continental United States. *Remote Sensing*. 8:815, DOI:10.3390/rs8100815. (Corresponding author)

194. GBD 2015 Risk Factors Collaborators. 2016. Global, regional and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 195 countries: 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 388(10053):1659 - 1724. PMID: 27733284, PMCID: PMC5388856.

195. Lim SS, Allen K, Bhutta ZA, Dandona L, Forouzanfar MH, Fullman N, et al. 2016. Measuring the health-related sustainable development goals in 188 countries: A baseline analysis from the global burden of disease study 2015. Lancet. 388(10053):1813-1850. PMID: 27665228, PMCID: PMC5055583.

196. GBD 2015 DALYs and HALE Collaborators. 2016. Global, regional, and national disability-adjusted life years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990-2015: a systematic analysis for the Global Burden of Diseases, Injuries, and Risk Factors (GBD) 2015 Study. Lancet. 388(10053):1603-1658. PMID: 27733283, PMCID: PMC5388857.

197. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. 2016. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 388(10053):1545 - 1602. PMID: 27733282, PMCID: PMC5055577.

198. Archer-Nicholls S, Carter E, Kumar R, Xiao Q, Liu Y, Frostad J, Forouzanfar M, Cohen A, Brauer M, Baumgartner J, and Wiedinmyer C. 2016. The Regional Impact of Cooking and Heating Emissions on Air Quality and disease Burden in China. *Environ Sci Tech*. 50(17):9416-23. DOI: 10.1021/acs.est.6b02533. PMID: 27479733.

199. GBD 2015 Maternal Mortality Collaborators. 2016. Global, regional, and national levels of maternal mortality, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 388(10053):1775-1812. doi: 10.1016/S0140-6736(16)31470-2. PMID: 27733286 PMCID: PMC5224694.

200. GBD Mortality and Causes of Death Collaborators. 2016. Global, regional, and national life expectancy, all-cause and cause specific mortality for 249 causes of death, 1980 – 2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 388(10053):1459 - 1544. DOI: 10.1016/S0140-6736(16)31012-1. PMID: 27733281 PMCID: PMC5388903.

201. Snider G, Weagle C, Murdymootoo K, Ring A, Ritchie Y, Walsh A, Akoshile C, Anh N, Brook J, Qonitan F, Dong J, Griffith D, He K, Holben B, Kahn R, Lagrosas N, Lestari P, Ma Z*, Misra A, Quel E, Salam A, Schichtel B, Sergev L, Tripathi S, Wang C, Yu C*, Zhang Q, Zhang Y, Brauer M, Cohen A, Gibson M, Liu Y, Martins J, Rudich Y, and Martin R. 2016. Variation in Global Chemical Composition of PM2.5: Emerging Results from SPARTAN. *Atmos Chem Phys*. 16: 9629-9653, doi:10.5194/acp-16-9629-2016.

202. Li S*, Yu C, Chen L, Tao J, Ge W, Si Y, Liu Y. 2016. Inter-comparison of model-simulated and satellite-retrieved componential aerosol optical depths in China. Atmos. Env. 92-93: 416-421. (Corresponding author)

203. Li S*, Chen L, Fan M, Tao J, Wang Z, Yu C, Si Y, Letu H, Liu Y. 2016. Evaluation of GEOS-Chem and GOCART simulated aerosol profiles using CALIPSO observations over the Contiguous United States. Aerosol Air Qual Res. 16:3256-3265. DOI: 10.4209/aaqr.2015.03.0173. (Corresponding author)

204. Alman B, Pfister G, Hao H, Stowell J, Hu X, Liu Y, Strickland M. 2016. The association of wildfire smoke with respiratory and cardiovascular emergency department visits in Colorado in 2012: A case crossover study. Environ Health. 15:64, DOI: 10.1186/s12940-016-0146-8.

205. Liu C, Chen R, Meng X, Ma Z, Liu Y, Wang Y, Zhao Y, Kan H. 2016. Associations between ambient particulate air pollution and type 2 diabetes prevalence, blood glucose and glycosylated hemoglobin in China. *Environ Int*. 92–93:416-421. PMID: 27148900 PMCID: PMC4902714.

206. Russell M*, Belle J, Liu Y. 2017. The Impact of Three Recent Coal-fired Power Plant Closings on Pittsburgh Air Quality: A Natural Experiment. *J Air & Waste Manage Assoc*. 67 (1) 3-16. DOI:10.1080/10962247.2016.1170738. (Corresponding author)

207. Ma Z*, Liu Y, Zhao Q, Liu M, Zhou Y, Bi J. 2016. Estimating high resolution PM2.5 concentrations in Yangtze Delta Region of China using an improved linear mixed effect model. *Atmos. Environ*. 133:156-164. (Corresponding author)

208. Chen K, Zhou L, Chen X, Ma Z, Liu Y, Huang L, Bi J, Kinney P. 2016. Urbanization level and vulnerability to heat-related mortality in Jiangsu Province, China. *Environ Health Perspect*. 124:1863-1869. PMID: 27152420, PMCID: PMC5132638.

209. Zhong M, Saikawa E, Liu Y, Naik V, Horowitz L, Takigawa M, Zhao Y, Lin N, and Stone E. 2015. Air Quality Modeling with WRF-Chem v3.5 in East and South Asia: Sensitivity to Emissions and Evaluation of Simulated Air Quality. *Geoscientific Model Development*. 9:1201-1218.

210. Hu X*, Yu C, Tian D, Ruminski D, Robertson K, Waller L, Liu Y. 2016. Comparison of the Hazard Mapping System (HMS) fire product to ground-based fire records in Georgia, USA. *JGR-Atmos*. 121 (6): 2901–2910. (Corresponding author)

211. Xiao Q*, Zhang H, Choi M, Li S, Kondragunta S, Kim J, Holben B, Levy R, Liu Y. 2016. Evaluation of VIIRS, GOCI, and MODIS Collection 6 AOD retrievals against ground sunphotometer measurements over East Asia. *Atmos Chem Phys*. 16(3), 1255-1269. (Corresponding author)

212. Huang L, Chen J, Zhou L, Chen K, Liu Y, Chen X, Tang F. 2016. Acute Effects of Air Pollution on Influenza-like Illness in Nanjing, China: A Population-based Study. *Chemosphere*. 147, 180-187. PMID: 26766354.

213. Girguis M, Strickland M, Hu X, Liu Y, Bartell S, Vieira V. 2016. Maternal Exposure to Traffic-Related Air Pollution and Birth Defects in Massachusetts. *Environ Res*. 146: 1-9. PMID: 26705853, PMCID: PMC4761511.

214. Brauer M, Freedman G, Frostad J, van Donkelaar A, Martin R, Dentener F, van Dingenen R, Estep K, Amini H, Apte J , Balakrishnan K, Barregard L, Broday D, Feigin V, Ghosh S, Hopke P, Knibbs L, Kokubo Y, Liu Y, Ma S, Morawska L, Luis J, Sangrador T, Shaddick G, Anderson H, Vos T , Forouzanfar M, Burnett R, Cohen A. 2016. Ambient Air Pollution Exposure Estimation for the Global Burden of Disease 2013. *Environ Sci Technol*. 50(1), 79-88. PMID: 26595236.

215. Xu J, Martin R, van Donkelaar A, Kim J, Choi M, Zhang Q, Geng G, Liu Y, Ma Z, Huang L, Wang Y, Chen H, Che H, Lin P, and Lin N. 2015. Estimating ground-level PM2.5 in Eastern China using aerosol optical depth determined from the GOCI Satellite Instrument. *Atmos Chem Phys*. 15(22), 13133-13144, DOI:10.5194/acp-15-13133-2015.

216. Xiong X, Chen L, Liu Y, Cortesi U, Gupta P. 2015. Satellite observation of atmospheric compositions for air quality and climate study. *Advances in Meteorology*. Article ID 932012.

217. Meng X*, Ma Z, Fu Q, Chen L, Zou B, Zhang Y, Xue W, Wang J, Kan H, Liu Y. 2016. Estimating Ground-Level PM10 in a Chinese City by Combining Satellite Data, Meteorological Information and a Land Use Regression Model. *Environ Pollution*. 208, 177-184, PMID: 26499934. (Corresponding author)

218. GBD DALYs and HALE Collaborators. 2015. Global, regional, and national disability-adjusted life years (DALYs) for 306 diseases and injuries and healthy life expectancy (HALE) for 188 countries, 1990-2013: quantifying the epidemiological transition. *Lancet*. DOI: 10.1016/S0140-6736(15)61340-X. PMID: 26321261, PMCID: PMC4673910.

219. Li S*, Ma Z, , Xiong X, Christiani C, Wang Z, Liu Y. 2016. Satellite and ground observations of severe air pollution episodes in the winter of 2013 in Beijing, China. Aerosol and Air Quality Research. 16: 977-989. doi: 10.4209/aaqr.2015.01.0057. (Corresponding author)

220. Ma Z*, Hu X, Sayer A, Levy R, Zhang Q, Xue Y, Tong S, Bi J, Huang L, Liu Y. 2016. Satellite-Based Spatiotemporal Trends in PM2.5 Concentrations: China, 2004 - 2013. *Environ Health Perspect*. 124:184-192, PMID:26220256, PMCID:PMC4749081. (Corresponding author)

221. GBD Risk Factors Collaborators. 2015. Global, regional, and national comparative risk assessment of 79 behavioral, environmental, occupational, and metabolic risks or clusters of risks in 188 countries 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. DOI: 10.1016/S0140-6736(15)00128-2.

222. Zheng Y, Zhang Q, Liu Y, Geng G, He K. 2015. Estimating ground-level PM2.5 concentrations over three megalopolises in China using satellite-derived aerosol optical depth measurements. *Atmos Environ*. DOI:10.1016/j.atmosenv.2015.06.046.

223. Vargo J*, Xiao Q, Liu Y. 2015. The Performance of the National Weather Service Heat Warning System Against Ground Observations and Satellite Imagery. Advances in Meteorology. 2015: Article ID 649614.

224. Huang C, Nichols C, Goldman L, Liu Y, Chang H, Ren A , Li Z, Liu X, Gao S, Zhang Y. 2015. Ambient Air Pollution and Adverse Birth Outcomes: A Natural Experiment Study. *Population Health Metrics*. 13:17. DOI:10.1186/s12963-015-0050-4. PMID: 26190943, PMCID: PMC4506631.

225. Strickland M, Hao H, Hu X, Chang H, Darrow L, Liu Y. 2015. Pediatric emergency visits and short-term changes in PM2.5 concentrations in U.S. State of Georgia. *Environ Health Perspect*. 124:690-696. PMID: 26452298.

226. Li S*, Kahn R, Chin M, Garay M, Liu Y. 2015. Improving MISR retrieved aerosol microphysical properties using GOCART Data. *Atmos Meas Tech*. 8: 1157-1171. DOI: 10.5194/amt-8-1157-2015. (Corresponding author)

227. Moon T, Wang Y, Liu Y, Yu B. 2015. Evaluation of a MISR-based high-resolution aerosol retrieval method using DISCOVER-AQ mission data. *IEEE T Geosci Remote*. 53(8):4328-4339. DOI: 10.1109/TGRS.2015.2395722.

228. Meng X*, Chen L, Zou B, Wu C, Fu Q, Zhang Y, Liu Y, Kan H. 2015. A Land Use Regression Model for Estimating the NO2 Concentration in Shanghai, China. Environ Res. 137: 308-315. PMID: 25601733.

229. Xiao Q*, Ma Z, Li S, Liu Y. The impact of winter heating on air pollution in China. 2015. *PLoS ONE*. 10:e0117311. PMID: 25629878. (Corresponding author)

230. Kim Y*, Zhou Y, Gao Y, Fu JS, Johnson B, Huang C, Liu Y. 2015. Spatially resolved estimation of ozone-related mortality in the united states under two representative concentration pathways (RCPs) and their uncertainty. *Climatic Change*. 128: 71-84. PMID: 25530644, PMCID: PMC4267285. (Corresponding author)

231. Zhou M, He G, Fan M, Wang Z, Liu Y, Ma J, Ma Z, Liu J, Liu Y, Wang L, Liu Y. 2015. Smog episodes, fine particulate pollution and mortality in China. *Environ Res*. 136:396-404. PMID: 25460661.

232. Lee P, Liu Y. Preliminary Evaluation of a Regional Atmospheric Chemical Data Assimilation System for Environmental Surveillance. 2014. Int. J. Environ. Res. Publ. Health. 11(12): 12795-12816. PMID: 25587606.

233. Hodges M, Belle J, Carlton E, Liang S, Li H, Luo W, Freeman M, Liu Y, Gao Y, Hess J, Remais J. 2014. Delays in reducing waterborne and water-related infectious diseases in China under climate change. Nature Climate Change. doi:10.1038/nclimate2428. PMID: 25530812, PMCID: PMC4266400.

234. Hu X*, Waller L, Lyapustin A, Wang Y, Liu Y. 2014. Improving Satellite-Driven PM2.5 Models with MODIS Fire Counts in the Southeastern U.S. J Geophys Res-Atmos. 119: 11375-11386. (Corresponding author)

235. Murray CJL, Ortblad KF, Guinovart C, Lim SS, Wolock TM, Roberts DA, et al. 2014. Global, regional, and national incidence and mortality for HIV, tuberculosis, and malaria during 1990-2013: A systematic analysis for the global burden of disease study 2013. *The Lancet*. 384:1005-1070. PMID: 25059949, PMCID: PMC4202387.

236. Snider G, Weagle C, Martin R. van Donkelaar A, Conrad K, Zwicker M, Akoshile C, Artaxo P, Anh N, Brook J, Dong J, Greenwald R, He K, Holben B, Kahn R, Koren I, Lagrosas N, Lestari P, Ma Z, Martins V, Quel E, Rudich Y, Salam A, Tripathi S, Yu C, Zhang Q, Zhang Y, Brauer M, Cohen A, Gibson M, Liu Y. 2015. SPARTAN: A Global Network to Evaluate and Enhance Satellite-Based Estimates of Ground-level Aerosol for Global Health Applications. Atmos Meas Tech. 8:505-521.

237. Lorenz A, Dhingra R, Chang HH, Bisanzio D, Liu Y, Remais JV. 2014. Intermodel comparison of the landscape determinants of vector-borne disease: implications for epidemiological and entomological risk modeling. PLoS ONE. 9(7): e103163. DOI:10.1371/journal.pone.0103163. PMID: 25072884, PMCID: PMC4114569.

238. GBD 2013 Mortality and Causes of Death Collaborators. 2015. Global, regional, and national age–sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: A systematic analysis for the global burden of disease study 2013. The Lancet 385:117-171. PMID: 25530442, PMCID: PMC4340604.

239. Kassebaum NJ, Bertozzi-Villa A, Coggeshall MS, Shackelford KA, Steiner C, Heuton KR, et al. 2014. Global, regional, and national levels and causes of maternal mortality during 1990-2013: A systematic analysis for the global burden of disease study 2013. The Lancet. 384:980-1004. PMID: 24797575, PMCID: PMC4255481.

240. Wang Z*, Chen L, Tao J, Liu Y, Hu X, Tao M. 2014. An empirical method of RH correction for satellite estimation of ground-level pm concentrations. Atmos Environ. 95:71-81.

241. Ma Z*, Hu X, Huang L, Bi J, Liu Y. 2014. Estimating ground-level PM2.5 in China using satellite remote sensing. Environ. Sci. Technol. 48(13), 7436-7444, DOI:10.1021/es5009399. PMID: 24901806. (Corresponding author)

242. Duncan B, Prados A, Lamsal L, Liu Y, Streets D, Gupta P, Hilsenrath E, Kahn R, Beyersdorf A, Burton S, Fiore A, Fishman J, Henze D, Holben B, Hostetler C, Krotkov N, Lee P, Lin M, Pfister G, Pickering K, Pierce B, Yoshida Y, Ziemba L. 2014. Satellite data of atmospheric pollution for U.S. air quality applications: Examples of applications, summary of data end-user resources, answers to FAQs, and common mistakes to avoid. Atmos. Env. 94:647-662.

243. Xu Z, Liu Y, Ma Z, Toloo G, Hu W, Tong S. 2014. Assessment of the temperature effect on childhood diarrhea using satellite imagery. 2014. Sci Rep. 4: Article No 5389. PMID: 24953087; PMCID: PMC4066260.

244. Yu C*, Chen L, Zhang X, Girolamo LD, Liu Y. 2015. Statistical evaluation of the feasibility of satellite-retrieved cloud parameters as indicators of PM2.5 levels. J Expo Sci Environ Epidemiol. 25(5): 457-466. DOI:10.1038/jes.2014.49. PMID: 25052693. (Corresponding author)

245. Xu Z, Liu Y, Ma Z, Toloo G, Hu W, Tong S. 2014. Impact of temperature on childhood pneumonia estimated from satellite remote sensing. Environmental Research. 132:334-341. PMID: 24834830.

246. Kim Y*, Kim S, Liu Y. 2014. The impact of climate change on heat-related mortality in six major cities, South Korea, under representative concentration pathways (RCPs). *Frontiers in Environ Sci*. 2: Article 3. DOI: 10.3389/fenvs.2014.00003. (Corresponding author)

247. Li S*, Chen L, Garay M, Liu Y. 2014. Comparison of GEOS-Chem aerosol optical depth with AERONET and MISR data over the contiguous United States. *J Geophys Res-Atmos*. 118:1-14. (Corresponding author)

248. Hu X*, Waller LA, Lyapustin A, Wang Y, Al-Hamdan MZ, Crosson WL, Estes MG, Estes SM, Quattrochi DA, Puttaswamy SJ, Liu Y. 2014. Estimating Ground-Level PM2.5 Concentrations in the Southeastern United States Using MAIAC AOD Retrievals and a Two-Stage Model. *Remote Sens Environ*. 140:220-232. (Corresponding author)

249. Wu J*, Zhou Y, Gao Y, Fu JS, Johnson B, Huang C, Kim Y, Liu Y. 2014. Estimation and Uncertainty Analysis of Impacts of Future Heat Waves on Mortality in the Eastern United States. *Environ Health Perspect*. 12(1): 10-16. PMID: 24192064, PMCID: PMC3888568. (Corresponding author)

250. Hu X*, Waller LA, Lyapustin A, Wang Y, Liu Y. 2014. 10-Year Spatial and Temporal Trends of PM2.5 Concentrations in the Southeastern U.S. Estimated Using High-Resolution Satellite Data. *Atmos Chem Phys*. 14(12), 6301-6314. PMID: 28966656 PMCID: PMC5619667. (Corresponding author)

251. Puttaswamy S*, Nguyen H, Braverman A, Hu X, Liu Y. 2014. Statistical Data Fusion of Multi-sensor AOD over the Continental United States. Geocarto International. 29(1): 48-64. (Corresponding author)

252. Chang HH, Hu X, Liu Y. 2013. Calibrating MODIS Aerosol Optical Depth for Predicting Daily PM2.5 Concentrations via Statistical Downscaling. J Expo Anal Environ Epidemiol. 24(4): 398-404. PMID: 24368510, PMCID: PMC4065210.

253. Huang L, Zhou Y, Han Y, Hammitt J, Bi J, Liu Y. 2013. The Effect of the Fukushima Nuclear Accident on the Risk Perception of Residents near a Nuclear Power Plant in China. *Proc Natl Acad Sci*. 110(49): 19742-19747. PMID: 24248341, PMCID: PMC3856800.

254. Dhingra R, Jimenez V, Chang HH, Gambhir M, Liu Y, Remais JV. 2013. Spatially-explicit simulation modeling of ecological response to climate change: methodological considerations in predicting shifting population dynamics of infectious disease vectors. ISPRS International Journal of Geo-Information. 2:645-664. PMID: 24772388, PMCID: PMC3997168.

255. Gao Y, Fu JS, Drake JB, Lamarque JF, Liu Y. 2013. The impact of emissions and climate change on ozone in the United States under Representative Concentration Pathways (RCPs). Atmos Chem Phys. 13:9607-9621.

256. Zhou Y, Hammitt J, Fu JS, Gao Y, Liu Y, Levy JI. 2014. Major factors influencing the health impacts from controlling air pollutants with nonlinear chemistry: an application to China. *Risk Analysis*. 34(4):683-97, DOI: 10.1111/risa.12106. PMID: 23998205.

257. Liu Y. 2013. New Directions: Satellite driven PM2.5 exposure models to support targeted particle pollution health effects research. *Atmos Environ*. 68:52-53.

258. Kim M, Zhang X, Holt J, Liu Y. 2013. Spatio-temporal variations in the associations between hourly PM2.5 and Aerosol Optical Depth (AOD) from MODIS sensors on Terra and Aqua. Health. 5:8-13. PMID: 26336576, PMCID: PMC4554528.

259. Hu X*, Waller LA, Al-Hamdan MZ, Crosson WL, Estes Jr MG, Estes SM, Quattrochi DA, Sarnat JA, Liu Y. 2013. Estimating ground-level PM2.5 concentrations in the southeastern U.S. using geographically weighted regression. *Environ Res*. 121:1-10. PMID: 23219612. (Corresponding author)

260. Li S*, Chen L, Xiong X, Tao J, Su L, Han D, Liu Y. 2013. Retrieval of the Haze Optical Thickness in North China Plain Using MODIS Data. *IEEE Trans Geosci Remote Sens*. 51:2528-2540.

261. Wang Z, Liu Y, Hu M, Pan XC, Shi J, Chen F, He KB, Koutrakis P, Christiani DC. 2013. Acute health impacts of airborne particles estimated from satellite remote sensing. Environ Int. 51:150-159. PMID: 23220016, PMCID: PMC3711510.

262. Streets DG, Canty T, Carmichael GR, de Foy B, Dickerson RR, Duncan BN, Edwards DP, Haynes JA, Henze DK, Houyoux MR, Jacob DJ, Krotkov NA, Lamsal LN, Liu Y, Lu Z, Martin RV, Pfister GG, Pinder RW, Salawitch RJ, Wecht KJ. 2013. Emissions estimation from satellite retrievals: A review of current capability. Atmos Environ. 77:1011-1042.

263. Liu Y, He K, Li S, Wang Z, Christiani D, Koutrakis P. 2012. A statistical model to evaluate the effectiveness of PM2.5 emissions control during the Beijing 2008 Olympic Games. *Environ Int*. 44:100-105. PMID: 22406019.

264. Qu C, Ma Z, Yang J, Liu Y, Bi J, Huang L. 2012. Human Exposure Pathways of Heavy Metals in a Lead-Zinc Mining Area, Jiangsu Province, China. *PLoS ONE*. 7(11):e46793. PMID: 23152752, PMCID: PMC3496726.

265. Gao Y, Fu JS, Drake JB, Liu Y, Lamarque JF. 2012. Projected changes of extreme weather events in the eastern United States based on a high resolution climate modeling system. Environ Res Lett. 7:Article No. 044025.

266. Wang Y, Li LJ, Liu Y. 2012. Characteristics of atmospheric NO2 in the Beijing-Tianjin-Hebei region and the Yangtze River Delta analyzed by satellite and ground observations. *Huanjing Kexue*. 33:3685-3692. PMID: 23323394.

267. Liu Y, Wang ZF, Wang J, Ferrare RA, Newsom RK, Welton EJ. 2011. The effect of aerosol vertical profiles on satellite-estimated surface particle sulfate concentrations. *Remote Sens Environ*. 115:508-513.

268. Li L, Liu Y. 2011. Space-borne and ground observations of the characteristics of CO pollution in Beijing, 2000-2010. *Atmos Environ*. 45:2367-2372.

269. Lee H, Liu Y, Coull B, Schwartz J, Koutrakis P. 2011. A novel calibration approach of MODIS AOD data to predict PM2.5 concentrations. *Atmos Chem Phys*. 11:7991-8002.

270. Lin J, Nielsen C, Zhao Y, Lei Y, Liu Y, McElroy MB. 2010. Recent Changes in Particulate Air Pollution over China Observed from Space and the Ground: Effectiveness of Emission Control. *Environ Sci Technol*. 44:7771-7776. PMID: 20828193.

271. Sarnat J, Moise T, Shpund J, Liu Y, Pachon JE, Qasrawi R, Abdeen Z, Brenner S, Nassar K, Saleh R, Schauer JJ. 2010. Assessing the spatial and temporal variability of fine particulate matter components in Israeli, Jordanian, and Palestinian cities. *Atmos Environ*. 44:2383-2392.

272. Diner D, Ackerman T, Braverman A, Bruegge C, Chopping M, Clothiaux E, Davies R, Di Girolamo L, Kahn R, Knyazikhin Y, Liu Y, Marchand R, Martonchik JV, Muller JP, Nolin AW, Pinty B, Verstraete MM, Wu DL, Garay MJ, Kalashnikova OV, Davis AB, Davis ES, Chipman RA. 2010. Ten Years of MISR Observations from Terra: Looking Back, Ahead, and in Between. In: IEEE International Symposium on Geoscience and Remote Sensing IGARSS, 1297-1299.

273. Paciorek C, Liu Y. 2009. Limitations of Remotely Sensed Aerosol as a Spatial Proxy for Fine Particulate Matter. *Environ Health Perspect*. 117:904-909. PMID: 19590681, PMCID: PMC2702404.

274. Liu Y, Chen D, Kahn RA, He KB. 2009. Review of the applications of Multiangle Imaging SpectroRadiometer to air quality research. *Science in China Series D-Earth Sciences*. 52:132-144.

275. Liu Y, Kahn R, Chaloulakou A, Koutrakis P. 2009. Analysis of the impact of the forest fires in August 2007 on air quality of Athens using multi-sensor aerosol remote sensing data, meteorology and surface observations. *Atmos Environ*. 43:3310-3318.

276. Liu Y, Paciorek CJ, Koutrakis P. 2009. Estimating Regional Spatial and Temporal Variability of PM2.5 Concentrations Using Satellite Data, Meteorology, and Land Use Information. *Environ Health Perspect*. 117:886-892. PMID: 19590678, PMCID: PMC2702401.

277. Liu Y, Schichtel BA, Koutrakis P. 2009. Estimating Particle Sulfate Concentrations Using MISR Retrieved Aerosol Properties. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing. 2:176-184.

278. Paciorek C, Liu Y, Moreno-Macias H, Kondragunta S. 2008. Spatio-temporal associations between GOES aerosol optical depth retrievals and ground-level PM2.5. *Environ Sci Technol*. 42:5800-5806.
279. Liu Y, Franklin M, Kahn RA, Koutrakis P. 2007. Using Aerosol Optical Thickness to Predict Ground-Level PM2.5 Concentrations in the St. Louis Area: a Comparison Between MISR and MODIS. Remote Sens Environ. 107:33-44.
280. Liu Y, Koutrakis P, Kahn RA. 2007. Estimating PM2.5 Component Concentrations and Size Distributions Using Satellite Retrieved Fractional Aerosol Optical Depth: Part I - Method Development. J Air & Waste Manage Assoc. 57:1351-1359. PMID: 18069458.
281. Liu Y, Koutrakis P, Kahn R, Turquety S, Yantosca RM. 2007. Estimating PM2.5 Component Concentrations and Size Distributions Using Satellite Retrieved Fractional Aerosol Optical Depth: Part II - A Case Study. J Air & Waste Manage Assoc. 57:1360-1369. PMID: 18069458.
282. Jiang X, Liu Y, Yu B, Jiang M. 2007. Comparison of MISR aerosol optical thickness with AERONET measurements in Beijing metropolitan area. Remote Sens Environ. 107:45-53.
283. Liu Y, Sarnat JA, Kilaru A, Jacob DJ, Koutrakis P. 2005. Estimating ground-level PM2.5 in the eastern united states using satellite remote sensing. Environ Sci Technol. 39:3269-3278. PMID: 15926578.
284. Liu Y, Park RJ, Jacob DJ, Li QB, Kilaru V, Sarnat JA. 2004. Mapping annual mean ground-level PM2.5 concentrations using Multiangle Imaging Spectroradiometer aerosol optical thickness over the contiguous United States. J Geophys Res-Atmos. 109:Art. No. D22206.
285. Liu Y, Sarnat JA, Coull BA, Koutrakis P, Jacob DJ. 2004. Validation of multiangle imaging spectroradiometer (MISR) aerosol optical thickness measurements using aerosol robotic network (AERONET) observations over the contiguous United States. J Geophys Res-Atmos. 109:Art. No. D06205.
286. He D, Hao J, Fu L, Zhou Z, Liu Y, Wang Z, Deng Y. 1999. Pollution Assessment in Urban Street Canyons of Macao Using OSPM Model (In Chinese). ACTA Scientiae Circumstantiae. 19:256-261.
287. 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.
288. 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 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. Kahn, R. A.; Liu, Y.; Diner, D. J. Space-Based Passive Aerosol Remote Sensing from the Multi-angle Imaging SpectroRadiometer (MISR) aboard NASA's Terra Satellite. In *Handbook of Air Quality and Climate Change*, Akimoto, H., Tanimoto, H. (eds.). 2022 Springer Singapore, pp 1-14. ISBN 978-981-15-2527-8.

2. 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.

3. 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. The CEOS Atmospheric Composition – Virtual Constellation Aerosol Air Quality Team, led by S. Kondragunta and B. Veihelmann. 2022. Monitoring Surface PM2.5: An International Constellation Approach to Enhancing the Role of Satellite Observations, a White Paper for the Committee on Earth Observation Satelliltes.
2. Bratburd J, Gupta P, Kondragunta S, Zhang H, Henderson B, Dickerson P, Sayeed A, Liu Y, Mao J, Pruthi D, Gundipudi K, White J, Wyatt R, Soja A, Levy R, Martin R, Christopher S, Pavlovic N. 2022. Air Quality Data When You Need It: Incorporating Satellite Data Updates into AirNow. *EM Plus*. Q3.

3. Turpin BJ, Baccarelli A, Dockery DW, Dolinoy DC, Levy JI, Liu Y, et al. 2022. Department chairs weigh in: Environmental health education is more essential than ever. *Am J Public Health*. 112:75-76.
4. Contributor and reviewer, The Lancet Countdown on Health and Climate Change Policy Brief for the United States of America. 2021. https://www.lancetcountdownus.org/2021-lancet-countdown-us-brief/.
5. Liu Y, Effectively Facilitating the Collaboration between the Environmental Health Community in China and Overseas Scholars. 2015. *China Health Review* 6(1): 9-11.
6. Liu Y. 2014. Monitoring PM2.5 from Space for Health: Past, Present, and Future Directions. *EM*. Pp 6-10.

Manuscripts Under Review

1. Pruthi D, Zhu Q, Wang W, Liu Y. Estimate Full Spatial Coverage Hourly PM2.5 using GOES-R AOD, HRRR Meteorology, and Wavelet Transformation. Remote Sens Environ. Submitted.
2. Zhu Q, Liu Y, Hasheminassab S. Long-Term Source Apportionment of PM2.5 across the contiguous United States (2000-2019) Using a Multilinear Engine Model. J Hazardous Mater. Submitted.
3. Liu Y, Huang L, Liu B, Naranjo A, Liu J, Wang J, Ren F, Wang Y, Liu Y, Bi J. The Impact of Crisis Exposure on Nuclear Power Acceptance in China. PNAS. Submitted.
4. Jia Y, He Z, Liu F, Li J, Liang F, Huang K, Chen J, Cao J, Li H, Shen C, Yu L, Liu X, Hu D, Huang J, Zhao Y, Liu Y, Lu X, Gu D, Chen S. Dietary intake changes the associations between long-term exposure to fine particulate matter and the surrogate indicators of insulin resistance. Environ Int. Revision submitted.
5. Li Q, Liu F, Huang K, Liang F, Shen C, Liao J, Li J, Yuan C, Yang X, Cao J, Chen S, Hu D, Huang J, Liu Y, Lu X, Gu D. Physical activity, long-term fine particulate matter exposure and type 2 diabetes incidence: A Prospective Cohort Study. Environ Int. Submitted.
6. Kuo C, Fu J, Liu Y. Perspective Improvement of Air Pollution Regional Burden of Disease Estimation by Machine Intelligence. Nature Communications. Submitted.
7. Hao H, Xu K, Zhang D, Deng Y, Wang W, Zhu Q, Pu Q, Pattisapu V, Steenland K, Chang H, Alonso A, Liu Y. Cardiovascular Disease Incidence and Long-term Exposure to Wildfire Smoke. New England Journal of Medicine. Submitted.
8. Hao H, Pattisapu V, Liu Y. Regional Variation in Takotsubo Syndrome Diagnoses Across the United States. JACC. Submitted.
9. Reuther P, Geng G, Liu Y, Darrow L, Strickland M. Associations between satellite-derived estimates of PM2.5 species concentrations for organic carbon, elemental carbon, nitrate, and sulfate with birth weight and preterm birth in California during 2005- 2014. J Expo Sci Environ Epidemiol. Revision Submitted.
10. Wu Y, Wang Y, Yang J, Gu B, Wang J, Sun H, Li C, Ren F, Liu Y, Huang L. Unequal Health Burden from Air Pollution among Minors in Education with Urban Development. Environ Sci Technol. Submitted.
11. Xi Y, Wettstein Z, Kshirsagar A, Liu Y, Zhang D, Hang Y, Rappold A. Exposure to high temperature is associated with elevated risk for cardiovascular outcomes and mortality among hemodialysis patients in the United States. Clin J Am Soc Nephrol. Submitted.
12. Jia Y, He Z, Liu F, Li J, Liang F, Huang K, Chen J, Cao J, Li H, Shen C, Yu L, Liu X, Hu D, Huang J, Zhao Y, Liu Y, Lu x, Gu D. Long-term Exposure to Fine Particulate Matter Worsen the Surrogate Indicators of Insulin Resistance: Evidence from China-PAR Project. Ecotoxicology and Environmental Safety. Submitted.
13. Zhu Q, Lyu Y, Huang K, Zhou J, Wang W, Steenland K, Chang H, Ebelt S, Shi X, Liu Y. Air pollution and cognitive impairment among the Chinese elderly population: A Nationwide cohort study. Geohealth. Submitted.
14. Ma Y, Zeng E, Liu Y, Lu Y, Krumholz H, Bell M, Chen K. Wildfire smoke PM2.5 and mortality in the contiguous United States. PNAS. Submitted.

PRESENTATIONS

Invited Presentations in Academic Conferences

1. Liu Y. The Emory Climate & Health Actionable Research and Translation Center. **1st Annual CAFÉ Climate and Health Conference** (Virtual), February 5-7, 2024.

2. Liu Y. Remote Sensing Data Applications in Climate Change and Health Research. **1st Annual CAFÉ Climate and Health Conference** (Virtual), February 5-7, 2024.

3. Liu Y. Spatial and Temporal Characteristics of PM2.5 Using Remote Sensing Data. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.

4. Liu Y. Preparing local and state air quality and public health stakeholders for integrating the next generation satellite instruments. **APHA Annual Meeting & Expo**, Atlanta, GA, Nov 12 – 15, 2023

5. Liu Y. Integration of Ground Measurement Networks, Numerical Models, and Satellite Data in the Characterization of PM2.5 Levels in the US. **AAAR 41st Annual Conference**, Portland, OR, October 2-6, 2023

6. Liu Y. Satellite Applications in Air Pollution Exposure Assessment**. AiR-Climate-Health (ARCH) Integrated Study and Exchange Platform Seminar**, Beijing, China, July 9, 2023

7. Liu Y. Potentials applications of detailed PM2.5 composition information in environmental health research. **The ASCENT Workshop**. Atlanta, GA, May 25 – 26, 2023.

8. Liu Y. Successful Applications of Satellite Data Products in Air Quality Monitoring and Public Health Research. **EPA Region 4 spring grants/planning meeting/ Metro 4/SESARM Spring Air Directors' Meeting**. Atlanta, GA, April 27, 2023.

9. Liu Y and Philipsborn R. Climate and Health + Overview of the Emory Climate Research Initiative (ECRI). **Georgia CTSA Bluesky Groups seminar** (Virtual). March 28, 2023.

10. Liu Y. Successful Applications of Satellite Data Products in Air Quality Monitoring and Public Health Research and Decision Support. **NASA AOS Applications Seminar Series** (Virtual). March 9, 2023.

11. Liu Y. Population exposure to wildfire smoke and its associated health impact in the Western US. **The CalTech Yuk Lunch Seminar** (Virtual), Feb 22, 2023.

12. Liu Y, Zhang D, Xi Y, Nogueira L. Association between Lung Cancer Survival and Wildfire Exposure in the US. **The AGU Fall meeting,** Chicago, IL, Dec 12-16, 2022.

13. Liu Y. Introduction to the lancet countdown project on health and climate change. **WMO Sand and Dust Storm-Warning Advisory System (SDS-WAS) Extended Global Steering Committee (SC) Annual Meeting**. Miami, Florida, December 1 – 2, 2022.

14. Liu Y. Satellite Remote Sensing for Air Quality and Health. **HEI's Virtual Workshop on Health Applications for Satellite-Derived Air Quality: Opportunities and Potential Pitfalls.** April 20 – May 18, 2022**.**

15. Liu Y. Field Evaluation Results of an Automated Pollen Sensor. **National Atmospheric Deposition Program (NADP) / Council of State and Territorial Epidemiologists (CSTE) Aeroallergen Monitoring Science Committee Meeting**. Madison, Wisconsin. April 20, 2022.

16. Tong D and Liu Y. Unprecedented Air Quality and Health Effects of the 2020 Western United States Wildfires. AGU GeoHealth Webinar, March 11, 2022.

17. Liu Y. Satellite-based long-term spatiotemporal patterns of surface ozone concentrations in China. **Emory-Nanjing University Joint Workshop on Air pollution, Weather, Climate, Health and Ecosystem (Virtual).** November 9, 2021.

18. Liu Y. Application of GOES-16 and high-resolution meteorology data in estimating hourly PM2.5 levels in California. **Meteorology and Climate Modeling for Air Quality (Virtual)**. September 14 – 17, 2021.

19. Liu Y. The Impact of Climate Change and Emissions Control on Future Ozone Levels in the US. **2021 GA Climate Conference.** Jekyll Island, GA, August 12-13, 2021.

20. Liu Y. Emerging Satellite Instruments and Products for Estimating Air Pollution Exposure. **NIEHS Meeting on Integrating Multiscale Geospatial Environmental Data into Large Population Health Studies (Virtual)**. June 15-16, 2021.

21. Liu Y. Update on the Multi-Angle Imager for Aerosols (MAIA). **CEOS Atmospheric Composition Virtual Constellation AC-VC-17 (Virtual).** June 7 – 11, 2021.

22. Liu Y. Climate change at Emory: how do we make a difference? **Emory Board of Visitors Meeting (Virtual)**. May 4, 2021.

23. Liu Y. Pre-workshop Presentation: Satellite Data for Environmental Health: What is Available and Possible. **Leveraging Advances in Remote Geospatial Technologies to Inform Precision Environmental Health Decisions - Impacts – A Workshop of the National Academies of Sciences, Engineering, and Medicine (Virtual).** April 15-16, 2021.

24. Liu Y. Using Satellite Data in Air Pollution Health Effects Research. **NASA A-CCP Air Quality Virtual Workshop**. March 16th- 18th, 2021.

25. Liu Y. Integration of satellite remote sensing and low-cost sensor data in $PM_{2.5}$ exposure modeling. **School of Environment, Tsinghua University**, Beijing, China (online). December 15, 2020.

26. Liu Y. Assessing the adverse health impacts of climate change with dynamical downscaling. **School of Environment, Tsinghua University**, Beijing, China (online). November 27, 2020.

27. Liu Y and Stowell J. Synergistic applications of new data and technology to characterize the health impact of smoke PM2.5. **Wildland Fires: Towards Improved Understanding and Forecasting of Air Quality Impacts – A Workshop of the National Academies of Sciences, Engineering, and Medicine (Virtual)**. September 23 – 25, 2020.

28. Vu B, Bi J, Wang W, Huff A, Kondragunta S, Liu Y. GOES16-Based Estimation of Hourly PM2.5 Levels During the Camp Fire in California. **ISES 2020 Virtual Meeting**. September 20 – 21, 2020.

29. Diner D and Liu Y. Satellite aerosol products and PM2.5 - current state of the art. **CEOS Atmospheric Composition – Virtual Constellation AC-VC-16**. June 8 – 12, 2020.

30. Liu Y. Synergistic application of MAIA and TEMPO for air pollution and health effects. **MAIA-TEMPO Early Adopters Virtual Workshop**. May 18 – 19, 2020.

31. 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.

32. 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.

33. 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.

34. Liu Y. Protecting Public Health from Space: the Past, Present, and Future. **2019 CDC Tracking Fall Recipient Workshop**, Atlanta, GA, September 4 – 6, 2019.

35. 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.

36. 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.

37. 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.

38. 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.

39. 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.

40. Liu Y. Remote Sensing of PM Air Pollution, Exposure Modeling, and Health Effects. **The 27th Annual ISES Meeting**. Durham, NC, October 15 – 19, 2017.

41. Liu Y. Estimating PM2.5 Components Using Satellite Data and Introduction to MAIA. **The Desert Research Institute.** Reno, NV, September 14, 2017.

42. 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.

43. 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.

44. 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.

45. 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.

46. 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.

47. 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.

48. 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.

49. 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.

50. Liu Y. Satellite Applications in the Monitoring and Modeling of Atmospheric Aerosols. **Second Suomi NPP Applications Workshop**, Huntsville, Alabama, November 18-20, 2014.

51. 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.

52. 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.

53. 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

54. 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.

55. 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.

56. 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.

57. 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.

58. 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.

59. 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.

60. Liu Y. Estimating PM Population Exposure from Satellite Data, **Environmental Forum, Nanjing University, School of Environment**, China, December 22, 2011.

61. **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.

62. **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.

63. Liu Y. Estimating PM Exposure with Satellite Remote Sensing. **HEI's 2011 Annual Conference**, Boston, MA, May 2, 2011.

64. 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.

65. **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.

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

67. 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.

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

69. 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.

70. **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.

71. **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.

72. **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.

73. 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.

74. 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.

75. 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.

76. 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.

77. 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 Academic Conferences

1. Hang Y, Pearson M, Ekenga C, Liu Y, Li E, Lebow-Skelley E, Merceron A, Chang H. Using NASA Earth Observations to Support Environmental Justice Communities in Atlanta, Georgia. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
2. Jin Z, Zhang D, Liu Y. A Super Learner Model to Estimate Wildfire Smoke PM2.5 Speciation Concentrations in the Contiguous U.S. and Southern Canada from 2002 to 2019 (poster presentation). **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
3. Yang B, Liu Y, Zhu Q, Prasad P, Wang W, Zhu Y. Socially Disadvantaged Communities in Southern California are Under Elevated Risk of Warehouse and E-Commerce Associated Air Pollution (poster presentation). **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
4. Deng Y, Liu Y. National Cohort Study of Long-Term Exposure to PM2.5 Components and Incident Dementia in Medicare American Older Adults (poster presentation). **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
5. Hao H, Xu K, Liu Y. Fire Smoke Exposure and Cardiovascular Health: A Cohort Study in the United States. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
6. Ma Y, Zang E, Liu Y, Wei J, Lu Y, Krumholz H, Bell M, Chen K. Association between ambient wildfire smoke PM2.5 and cause-specific mortality in the contiguous U.S. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
7. Hang Y, Meng X, Xi Y, Zhang D, Lin X, Liu Y. Atmospheric elemental carbon pollution and its regional health disparities in China. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
8. Dey S, Katoch V, Kumar A, Imam F, Sarkar D, Ganguly D, Knibbs L, Liu Y. Impact of satellite-AOD gap filling on recent changes in ambient PM2.5 exposure and associated health burden in India. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
9. Laurencin C, Saikawa E, Hassan S, Scovronick N, Liu Y. A Novel Cumulative Health Index to Characterize Exposure and Vulnerability to Climate Hazards. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
10. Diner D, Bator L, Hasheminassab S, Hunter R, Rheingans B, Weidman R, Liu Y, L'Orange C, Martin R, Oxford C, Picchiani M, Rum G and The MAIA Team. Status of the spaceborne and in-situ observational elements of the Multi-Angle Imager for Aerosols (MAIA) investigation into linkages between speciated particulate matter air pollution and human health. **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
11. Pu Q, Hang Y, Liu Y. A21E-2296A super learner model for predicting ambient particulate organic carbon concentrations across China from 2003 to 2019 (poster presentation). **The AGU Fall meeting,** San Francisco, CA, Dec 11-15, 2023.
12. Zhang D, Wang W, Xi Y, Bi J, Hang Y, Zhu Q, Pu Q, Chang H, Liu Y. Estimating Wildfire Smoke PM2.5 in the Contiguous US. **ISEE 2023 Annual Meeting**, Kaohsiung, Taiwan, September 18-21, 2023.
13. Jin Z, Liu Y. Estimating daily PM2.5 mass and speciation concentrations with prediction uncertainty using a MAIA-like algorithm. **The AGU Fall meeting,** Chicago, IL, Dec 12-16, 2022.
14. Hang Y, Liu Y. Satellite-Based Modeling of Long-Term Particulate Elemental Carbon in China. **The AGU Fall meeting,** Chicago, IL, Dec 12-16, 2022.
15. Sayeed A, Gupta P, Zhang H, Kondragunta S, Henderson B, Liu Y, Pruthi D, Mao J, Christopher S, Levy R, Dickerson P. GOES-R PM Evaluation and Bias Correction - A Deep Learning Approach. **The AGU Fall meeting,** Chicago, IL, Dec 12-16, 2022.
16. Bi J, Knowland E, Keller C, Liu Y. Combining Machine Learning and Numerical Simulation for High-Resolution PM2.5 Concentration Forecast. **The 2022 ISES Annual Meeting**. Lisbon, Portugal, September 25 – 29, 2022.
17. Zhang D, Wang W, Xi Y, Hang Y, Zhu Q, Liu Y. Estimating Wildfire Smoke PM2.5 from 2007 to 2018 in the Contiguous US. **The 2022 ISES Annual Meeting**. Lisbon, Portugal, September 25 – 29, 2022.
18. Bi J, Liu Y. A15O-1880 (poster): Combining machine learning and numerical simulation for high-resolution PM2.5 concentration forecast. **The AGU Fall meeting,** New Orleans, LA, Dec 13 – 17, 2021.

19. Jin Z, Ma Y, Chu L, Liu Y, Dubrow R, Chen K. GH25B-0636 (poster): Predicting spatiotemporally-resolved mean air temperature over Sweden from satellite data using an ensemble model. **The AGU Fall meeting,** New Orleans, LA, Dec 13 – 17, 2021.

20. Diner D, Whitten K, Hasheminassab S, Krasowsky T, Asfaw A, Blair J, Dillner A, Hall J, Kleidman R, Holben B, Liu Y, L'Orange C, Martin R, Walsh B, and the MAIA Team. A51C-02 (oral): Development Status of the Multi-Angle Imager for Aerosols (MAIA) Surface-Based Particulate Matter Measurement Network. **The AGU Fall meeting,** New Orleans, LA, Dec 13 – 17, 2021.

21. Zhang D, Du L, Wang W, Zhu Q, Bi J, Scovronick N, Naidoo M, Garland R, Liu Y. A35G-1710 (poster): A machine learning model to estimate ambient PM2.5 concentrations in industrialized highveld region of South Africa. **The AGU Fall meeting,** New Orleans, LA, Dec 13 – 17, 2021.

22. Hang Y, Liu Y. Particulate nitrate air pollution in China remains a considerable health problem. GH11A-04 (oral): **The AGU Fall meeting,** New Orleans, LA, Dec 13 – 17, 2021.

23. Stowell J, Wang L, Zhu Q, Chang H, Fu J, Scovronick N, Strickland M, Liu Y. GH016-04 (eLightning talk): Excess Asthma Events from Future Wildfires in the Western US: A Health Impact Assessment. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

24. Bi J, Wallace L, Sarnat J, Liu Y. GH016-02 (eLightning talk): Characterizing infiltration and indoor contribution of PM2.5 based on volunteer-generated monitoring data at large spatial and temporal scales. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

25. He M, Kinney P, Fiore A, Do V, Jin X, Liu S, DeFelice N, Bi J, Liu Y, Insaf T, Kioumourtzoglou M. GH009-04 (poster): Short-term PM2.5 and cardiovascular admissions in NY State: assessing sensitivity to exposure model choice. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

26. Liu Y, Geng G, Meng X, Chang H, Diner D. A111-0012 (poster): Using MAIA Data to Investigate PM Health Effects in Selected Urban Areas Around the World. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

27. Li Q, Xu M, Zhu Q, Liu Y. A066-0004 (poster): Estimating the impact of COVID-19 on the PM2.5 levels in China with a satellite-driven machine learning model. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

28. Liu Y, Wang W, Le S, Lee S, Zhu Q. A008-0008 (poster): Estimating Hourly PM2.5 Concentrations from 2015 – 2018 in South Korea Using GOCI AOD. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

29. Vu B, Bi J, Huff A, Kondragunta S, Liu Y. A008-0002 (poster): GOES16-Based Estimation of Hourly PM2.5 Levels during the Camp Fire Episode in California. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

30. Liu Y, Xiao Q, Liang F, Ning M, Zhang Q, Bi J, He K, Lei Y. GH009-02 (oral): Long-term trend of PM2.5-related mortality burden in China. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

31. Xu M, Li Q, Zhu Q, Liu X, Liu Y. A005-0007 (poster): Using TROPOMI-Based Estimation of Daily Ozone Levels to Assess the Impact of COVID-19 on Ozone Concentrations in China. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

32. Wang W, Liu X, Liu Y. A114-0003 (poster): A machine learning model to estimate ground ozone concentration in California, using TROPOMI Satellite Data. **The AGU Fall meeting** (online). Dec 1 – 17, 2020.

33. 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. A029-02 (oral): 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.

34. Bi J, Wallace L, Sarnat J, Liu Y. Characterizing infiltration and indoor contribution of PM2.5 based on volunteer-generated monitoring data at large spatial and temporal scales. **The AAAR 38th Annual Conference** (online). October 5-9, 2020.

35. Reuther P, Geng G, Liu Y, Darrow L, Strickland M. Associations between satellite-derived estimates of PM2.5 species concentrations and birth weight in California. The ISEE 2020 Virtual Meeting. August 14 – 17, 2020.

36. 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.

37. 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.

38. 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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.

44. 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.

45. 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.

46. 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.

47. 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.

48. 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.

49. 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.

50. 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)

51. 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.

52. 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.

53. 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.

54. 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.

55. 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.

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

57. 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.

58. 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.

59. 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.

60. 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.

61. 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.

62. 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.

63. 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.

64. 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.

65. 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.

66. 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.

67. 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.

68. 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.

69. 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.

70. 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.

71. 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.

72. 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).

73. 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.

74. 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)

75. 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.

76. 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.

77. 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.

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

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

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

81. 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.

82. 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.

83. 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.

84. 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.

85. 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.

86. 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.

87. 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.

88. 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.

89. 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.

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

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

TEACHING

2024	Emory/RSPH. EH 587: Introduction to Satellite Remote Sensing of the Environment and Its Applications in Public Health (Course Co-instructor).
2022	UGA/College of Public Health. EPID 8070 - Environmental and Occupational Epidemiology (Guest lecture)
2020-pre	Emory/RSPH. EH 586: Advanced Seminar in Climate Change and Health: Research and Policy (Course instructor)
2021	Emory/RSPH. EH 590R: R-based quantitative data analysis for environmental health research (Course coordinator)
2021-pre	College of Charleston. HEAL 215: Introduction to Public Health (Guest lecture)
2020-2023	Emory/RSPH. EH 501: Introduction to Environmental Health (Guest lecture)
2019-2020	Emory/RSPH. EH 510: Foundations of Exposure Science (Guest lecture)
2017-2019	Emory/RSPH. EH 590R: Intro to EH for EH masters students (Guest lecture)
2015	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)
2011-2020	Emory/RSPH. EH 587: Introduction to Satellite Remote Sensing of the Environment and Its Applications in Public Health (Course instructor).
2013	Emory/RSPH. EH 515: Air Quality in the Urban Environment: A Survey of Research methods and Recent Findings (Guest lecture)
2013-2015	Emory/RSPH. HLTH38-EH590: Genome, Exposome, and Health (Guest lecture)
2011-pre	Emory/RSPH. EH 582: 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)
2009-2010	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	Qiang Pu (2023 -), Hua Hao (2023 -), Qiao Zhu (2023 -), Qingyang Zhu (2023 -), Yanling Deng (2023 -), Meng Qi (2024 -,)
Completed	Yun Hang (2020 - 2023), Dimple Pruthi (2021 - 2023), Yuzhi Xi (2021 - 2022), 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	Zhihao Jin (GDEH, RSPH, Emory), chair Wenhao Wang (GDEH, RSPH, Emory), chair Brooke Lappe (GDEH, RSPH, Emory), committee member Shrey Gupta (Dept of Computer Science, Emory), committee member
2023	Qingyang Zhu (GDEH, RSPH, Emory), chair *Dissertation: Investigating the Association between Air Pollution and Cognitive and Mental Health Outcomes Using Satellite-Driven Exposure Models*
2021	Nancy Murray (Emory, RSPH, Dept. of Biostatistics and Bioinformatics), committee member

Dissertation: *Ambient Air Pollution Estimation Using Bayesian Hierarchical Models*

Bryan Vu (GDEH, RSPH, Emory), chair
Dissertation: Applications of Remote Sensing Data in Air Pollution Modeling and Utilization of Model-Derived Exposure Estimates in Epidemiological Studies

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 /Integrated Learning Experience (ILE) Advising at Emory

2024 Binyu Yang (EH), ILE mentor
2023 Anuj Nanavati (EH), chair; Prachi Prasad (EH), chair; Xiuran (BIOS), faculty advisor; Yijing Zhu (BIOS), faculty advisor
2022 Stephanie Kay (EH), faculty advisor; Lauren Sullivan (EH), faculty advisor
2021 Thora Middleton (EH), faculty advisor; Qiulun Li (EH), faculty advisor; Muwu Xu (EPI), committee member
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

Undergraduate Advising

2023 Yuxiao Wu, Emory College of Arts and Sciences, Advisor of summer research internship
2022 Haoran Cheng, Emory College of Arts and Sciences, Honors thesis committee member

Visiting PhD Students and Scholars

2023-2024 Prof. Soontae Kim and Dr. Eunhye Kim, Ajou University, Korea
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

2019-2020 SPH Appointments, Promotion and Tenure (APT) Committee (member)
2019-2020 Search Committee for the Chair of the Department of Biostatistics and Bioinformatics (member)
2018-2020 SPH Computation and Data Science Advisory Group (member)
2018-2021 SPH Research Advisory Committee (member)
2015-2018 University Senate Committee on the Environment (member)
2013-2018 SPH Committee on Community and Diversity (member)

2010-2012 SPH IT Advisory Committee (member)

2009-2018 SPH 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

2024-2027 Editor, *Geohealth*
2019-2023 Associate editor, *Remote Sensing*
2018- Associate editor, *Frontiers in Environmental Informatics*
2016-2020 Associate editor / Editorial board member, *Journal of Exposure Science And Environmental Epidemiology*
2013- Associate editor, *Frontiers in Environmental Health*
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

2023 Mentor, HEI summer fellowship
2023-2025 Climate and Health Outcomes Research Data Systems (CHORDS) Technical Expert Panel (TEP), NIH
2018-2021 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

2025 Conference Co-Chair, the 2025 ISES-ISEE Joint Conference, Atlanta, Georgia, USA

2024 Abstract reviewer, 2024 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Athens, Greece

2023 Co-chair, 2023 AGU Fall Meeting
GH23A - Advances in Interactions of Air Quality and Public Health Using Integrated Modeling Frameworks I Oral
GH24A - Advances in Interactions of Air Quality and Public Health Using Integrated Modeling Frameworks II Oral
GH31A - Advances in Interactions of Air Quality and Public Health Using Integrated Modeling Frameworks III Poster

2023 Climate and Health Session chair, The 3rd Georgia Climate Conference, May 15-17, 2023, Athens, Georgia, USA

2022 Reviewer, 2022 AGU Fall Meeting GeoHealth Elevator Pitch Competition

Co-chair, 2022 AGU Fall meeting
GH41A - Advances in Interactions of Air Quality and Public Health Using Integrated Modeling Frameworks I Online Poster Discussion
GH42C - Advances in Interactions of Air Quality and Public Health Using Integrated Modeling Frameworks II Poster
GH45A - Advances in Interactions of Air Quality and Public Health Using Integrated Modeling Frameworks III Oral

Abstract reviewer, The ISES 2022 annual meeting, September 25-30, 2022, Lisbon, Portugal.

2022 Session 3 co-chair and Session 4 panelist, HEI's Virtual Workshop on Health Applications for Satellite-Derived Air Quality: Opportunities and Potential Pitfalls. April 20 – May 18, 2022.

2020 Co-convener, GH003 - Current Methods and Challenges to Characterize the Impacts of Climate Change on Human Health (eLightning session). AGU Fall Meeting 2020 (online).

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

2023 Ad hoc reviewer for NIH EDD study section. November 2-3.

2022 Ad hoc reviewer for NIH IRAP study section. March 7-8.

2021 Ad hoc reviewer for NASA ROSES 2020 A.23: Atmospheric Composition Campaign Data Analysis and Modeling (NNH20ZDA001N-ACCDAM)

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; Journals of the American College of Cardiology; Journal of Environmental Management; Journal of the Air & Waste Management Association; Journal of the American College of Cardiology; 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

2020 -	American Association for the Advancement of Science (AAAS), member
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