

Curriculum Vitae
Yang Liu, PhD

Department of Environmental Health
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EDUCATION

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

PROFESSIONAL EXPERIENCE

Academic Appointments

- 2014- Associate Professor with Tenure
2009-2013 Assistant Professor
Department of Environmental Health
Emory University, Rollins School of Public Health, Atlanta, GA
- 2007-2008 Research Associate
2005-2007 Postdoctoral Research Fellow
Harvard T.H. Chan School of Public Health, Boston, MA
- 1999-2004 Graduate Research Assistant
Harvard John A. Paulson School of Engineering and Applied Sciences, Cambridge, MA
- 1998-1999 Graduate Research Assistant
University of California, Davis, CA

Other Professional Positions

- 2004-2005 Associate Consultant, ENVIRON International Corporation, Arlington, VA
05-07/2001 Intern, The World Bank Group, Washington, DC
1997-1998 Associate consultant, Environmental Resources Management (ERM) Group, Beijing, China

HONORS, FELLOWSHIPS, AND AWARDS

- 2015-2019 Fulbright Specialist Roster candidate, the U.S. Department of State's Bureau of Educational and Cultural Affairs (ECA) and the Institute of International Education's Council for International Exchange of Scholars (CIES)
- 2016-2019 Visiting Professor, Tsinghua University, China
2016-2019 Oriental Scholar, Shanghai Municipal Government, China
2014-2017 Senior Fellow on Health, Environment and Public Policy, Academy of Media and Public Affairs, Communication University of China

- 2013- Visiting professor, The Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences, Beijing, China
- 2013-2015 Senior visiting scholar, Fudan University, Shanghai, China
- 2009-2012 ORISE faculty fellow at CDC, Oak Ridge Institute for Science and Education
- 2010 CDC NCEH/ATSDR Honor Award for Excellence in Surveillance and Monitoring, group winner (the Environmental Public Health Tracking Branch)
- 2010 Fund for Innovative Teaching (FIT), Center for Faculty Development and Excellence, Emory University
- 2006 Early career and new faculty scientist travel award for participation in the “Air Quality Remote Sensing from Space” workshop at NCAR, Boulder CO
- 2003 Harvard University Center for the Environment Faculty Research Award (major contributor)
- 2002 Herbert Winokur, Jr. Fellowship, Harvard Graduate School of Arts and Sciences
- 2001 Ernst Habicht Fellowship, Harvard Division of Engineering and Applied Sciences
- 1997 Medal of Honor for Excellent College Graduates, Tsinghua University
- 1996 “12.9” Fellowship, Tsinghua University
- 1994 International Engineering and Technology Foundation Scholarship, Tsinghua University
- 1993, 95, 97 First-class Outstanding Student Scholarship, Tsinghua University

RESEARCH FUNDING

Principal Investigator

- 5/2017-3/2018 Developing Advanced PM2.5 Exposure Models in Lima, Peru
Funder: The HERCULES Exposome Research Center
Total Direct Costs: \$35,000
- 7/2016-6/2019 Using Earth Observations to Support Regional and National Environmental Health Surveillance (Grant # NNX16AQ28G)
Funder: NASA (Announcement of Opportunity NNH15ZDA001N-HAQST)
Total Direct Costs: \$285,037
Total Indirect Costs: \$85,427
- 6/2016-10/2025 Multi-Angle Imager for Aerosols (MAIA) instrument mission (Contract # 1558091)
Funder: NASA (Announcement of Opportunity NNH12ZDA006O-EVI3)
Total Emory Direct Costs: \$1,436,331
Total Emory Indirect Costs: \$804,343
Role: member of MAIA science team (PI: David Diner), PI of Emory subcontract
- 1/2016-12/2018 Wildfires in the Rocky Mountains Region: Current and Future Impacts on PM_{2.5}, Health, and Policy (Grant # 83586901-0)
Funder: USEPA
Total Direct Costs: \$585,493
Total Indirect Costs: \$200,596
- 5/2014-4/2018 NASA ROSES 2013, solicitation A.17 - Aura Science Team: Evaluate, Enhance, and Apply Aura Products in Public Health Tracking (Grant # NNX14AG01G)
Funder: NASA
Total Direct Costs: \$514,262

Total Indirect Costs: \$162,921

5/2011-4/2017 NASA Research Opportunities in Space and Earth Sciences (ROSES) 2009, Solicitation A.32 - Air Quality Applied Sciences Team: Improving Satellite Aerosol Remote Sensing Data for Air Pollution Health Research (Grant # I53G)
 Funder: NASA
 Total Direct Costs: \$655,410
 Total Indirect Costs: \$ 229,539

1/2009-3/2018 Improving MISR's Capability of Predicting Ground Level PM_{2.5} Concentrations with Observed Aerosol Vertical Profiles (Contract # 1363692)
 Funder: NASA Jet Propulsion Laboratory
 Total Direct Costs: \$257,861
 Total Indirect Costs: \$140,571

5/2011-4/2014 Uncertainties in Modeling Spatially-Resolved Climate Change Health Impacts (Grant # 1R21ES020225)
 Funder: NIH
 Total Direct Costs: \$275,000
 Total Indirect Costs: \$151,250

10/2009-9/2013 Assessing the Cumulative Climate-Related Health Risks in the Eastern U.S. (Cooperative agreement # 1 U01 EH000405)
 Funder: CDC
 Total Direct Costs: \$647,431
 Total Indirect Costs: \$ 230,489

10/2009-9/2013 NASA ROSES 2008, Solicitation A.18 - Decision Support Through Earth Science Research Results: Enhancing Environmental Public Health Tracking with Satellite-Driven Particle Exposure Modeling and Epidemiology (Grant # NNX09AT52G)
 Funder: NASA
 Total Direct Costs: \$393,577
 Total Indirect Costs: \$216,456

9/2009-8/2010 NASA ROSES 2008, Solicitation A.19 - Earth Science Applications Feasibility Studies: Satellite and Model Assisted Accountability Research To Support Clean Air Interstate Rule (SmartCAIR) (Grant # NNX09AQ54G)
 Funder: NASA
 Total Direct Costs: \$85,260
 Total Indirect Costs: \$26,963

Co-Investigator

2017-2022 Data Integration Methods for Environmental Exposures with Applications to Air Pollution and Asthma Morbidity (Grant #1R01ES027892)
 Funder: NIH
 Total Direct Costs of Emory contract: \$2,256,167
 Total Indirect Costs of Emory contract: \$1,146,333
 Principal Investigator: Howard Chang (Emory University)
 Role: Co-investigator (10% effort)

2014-2017 Evaluate and Enhance Suomi NPP Products for Air Quality and Public Health Applications
 Funder: NASA (NNX15AC28A)
 Total Direct Costs of Emory contract: \$60,659

Total Indirect Costs of Emory contract: \$33,969
Principal Investigator: Jun Wang (University of Nebraska-Lincoln)
Role: PI of Emory subcontract (10% effort)

2013-2015 Statistical Methods for Exposure Uncertainty in Air Pollution and Health Studies (Grant # 1R21ES022795)
Funder: NIH
Total Direct Costs: \$247,932
Total Indirect Costs: \$196,839
Principal Investigator: Howard Chang (Emory University)
Role: Co-investigator (10% effort)

2011-2016 Spatial and temporal modeling of PM_{2.5} and infant morbidity (Grant # 1R01ES019897)
Funder: NIH
Principal Investigator: Veronica Vieira (UC Irvine)
Total Direct Costs of Emory contract: \$266,724
Role: Co-Investigator (5% effort)

2012-2014 NASA Applied Remote SENSing Training (ARSET) air quality project (Contract # 0000011758)
Funder: NASA via University of Maryland
Total Direct Costs: \$20,118
Total Indirect Costs: \$7,846
Principal Investigator: Ana Prados (University of Maryland)
Role: Co-investigator (8% effort)

2011-2015 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
Total Direct Costs of Emory contract: \$39,715
Total Indirect Costs of Emory contract: \$21,843
Principal Investigator: Jun Wang (University of Nebraska-Lincoln)
Role: PI of Emory subcontract (10% effort)

2010-2015 The Emory/Georgia Tech Collaborative: Multi-Scale Assessment of Health Effects of Air Pollution Mixtures Using Novel Measurements and Models (Grant # D83479901)
Funder: USEPA
Total Costs: \$7,999,779
Principal Investigator: Paige Tolbert (Emory) and Ted Russell (Georgia Tech)
Role: Co-Investigator (10% effort)

2009-2013 Effect of Air Pollution and Traffic on Birth Outcomes (Grant # R01ES016317/A07290)
Funder: NIH
Total Direct Costs of Emory contract: \$59,032
Total Indirect Costs of Emory contract: \$32,467
Principal Investigator: Kathy Belanger and Michelle Bell (Yale University)
Role: PI of Emory subcontract (5% effort)

2010-2011 Application of Satellite Aerosol Remote Sensing Technology to Estimate the Health Impacts of Airborne Particles
Funder: Harvard NIEHS Center for Environmental Health Pilot Program
Total Costs: \$25,000
Principal Investigator: Zhaoxi Wang (Harvard University)
Role: Collaborator

- 2008-2009 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
 Total Costs: \$25,000
 Principal Investigator: David Christiani and Petros Koutrakis (Harvard University)
 Role: Co-investigator
- 2006-2009 Integrating satellite and monitoring data to retrospectively estimate monthly PM2.5 concentrations in the eastern United States
 Funder: Health Effects Institute
 Total Costs: \$300,000
 Principal Investigator: Chris Paciorek (Harvard University)
 Role: Co-Investigator (10% effort)

PROPOSALS UNDER REVIEW

Administrative Supplements to Regional Geohealth Hub Centered in Peru-US

Funder: NIH

Principal Investigator: Nelson K Steenland, (Emory University)

Role: Co-I

Extreme heat events and pregnancy duration: a national study

Funder: NIH

Principal Investigator: Howard Chang, (Emory University)

Role: Co-I

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: Co-Investigator
- 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: Co-Investigator

PUBLICATIONS

Google scholar citation statistics (as of September 2017): citations: 6242, h-index: 35.

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

1. R. Huang, X. Zhai, C. Ivey, M. Friberg, X. Hu*, **Liu Y**, Q. Di, J. Schwartz, J. Mulholland, A. Russell. 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*. In press.
2. M. Girguis, M. Strickland, X. Hu*, **Liu Y**, H. Chang, I. Kloog, C. Belanoff, S. Bartell, V. Vieira. Exposure to Acute Air Pollution and Risk of Bronchiolitis and Otitis Media for Preterm and Term Infants. *J Expo Sci Environ Epidemiol*. In press.

3. H. Chang, S. Sarnat, **Liu Y**. Projecting Health Impacts of Climate Change: Embracing an Uncertain Future. *Chance*. In press.
4. T. Lin, Q. Zeng, W. Dong, Q. Guo, Z. Wu, X. Pan, G. Li, **Liu Y**. Addressing the source contribution of PM2.5 on mortality: an evaluation study of its impacts on excess mortality in China. *Environ Res Lett*. In press.
5. Stowell JD*, Kim Y-m, Gao Y, Fu JS, Chang HH, **Liu Y**. 2017. The impact of climate change and emissions control on future ozone levels: implications for human health. *Environ Int*. 108: 41-50.
6. Q. Xiao*, Y. Wang, H. Chang, X. Meng*, G. Geng*, A. Lyapustin, **Liu Y**. Full-coverage high-resolution daily PM2.5 estimation using MAIAC AOD in the Yangtze River Delta of China. *Remote Sens Environ*. In press.
7. GBD cause of death collaborators. 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. *Lancet*. In press.
8. B. Holben, J. Kim, I. Sano, S. Mukai, T. Eck, D. Giles, J. Schafer, A. Sinyuk, I. Slutsker, A. Smirnov, M. Sorokin, B. Anderson, H. Che, M. Choi, J. Crawford, R. Ferrare, M. Garay, U. Jeong, M. Kim, W. Kim, N. Knox, Z. Li, H. Lim, **Liu Y**, H. Maring, M. Nakata, K. Pickering, S. Piketh, J. Redemann, J. Reid, S. Salinas, S. Seo, F. Tan, S. Tripathi, O. Toon, Q. Xiao. An overview of meso-scale aerosol processes, comparison and validation studies from DRAGON networks. *Atmos Chem Phys*. In press.
9. F. Liang*, T. Lin, Q. Guo, D. Westerdahl, **Liu Y**, X. Jin, G. Li, X. Pan. 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.
10. 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*. 7:7048; doi:10.1038/s41598-017-07478-0.
11. 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. *International Journal of Hygiene and Environmental Health*. 220:1055-1063. PMID: 28701289 PMCID: PMC5558860
12. 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. *Env. Res*. 158:54-60. DOI:10.1016/j.envres.2017.06.001. PUBMED ID: 28599195.
13. 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
14. 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*. DOI: 10.1021/acs.est.7b01148.
15. 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, DOI: 10.1021/acs.est.7b01210.
16. 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
17. A. Cohen, M. Brauer, R. Burnett, H. Anderson, K. Estep, J. Frostad, B. Brunekreef, L. Dandona, R. Dandona, V. Feigin, G. Freedman, B. Hubbell, H. Kan, L. Knibbs, **Liu Y**, R. Martin, L. Morawska, C. Pope, H. Shin, K. Straif, R. Dingenen, A. van Donkelaar, T. Vos, C. Murray, M. Forouzanfar. 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. *Lancet*. 389:1907-1918.
18. Shaddick G, Thomas ML, Green A, Brauer M, van Donkelaar A, Burnett R, Chang H, Cohen A, Dingenen R, Dora C, Gummy 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.

19. C. Liu, R. Chen, Y. Zhao, Z. Ma*, J. Bi, **Liu Y**, X. Meng, Y. Wang, X. Chen. 2017. Associations between ambient fine particulate air pollution and hypertension: a nationwide cross-sectional study in China. *Sci Total Environ*. 584–585:869-874.
20. Y. Zhou, S. Gilboa, M. Herdt, P. Lupo, W. Flanders, **Liu Y**, M. Shin, M. Canfield, R. Kirby. 2017. Maternal exposure to ozone and PM2.5 and the prevalence of orofacial clefts in four U.S. states. *Environ Res*. 153:35-40. doi: 10.1016/j.envres.2016.11.007.
21. M. Liu, Y. Huang, Z. Ma*, Z. Jin, X. Liu, H. Wang, **Liu Y**, J. Wang, M. Jantunen, J. Bi, P. Kinney. 2017. Spatial and temporal trends in the mortality burden of air pollution in China: 2004–2012. *Environ Int*. 98:75-81.
22. **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.
23. Q. Xiao*, **Liu Y**, J. Mulholland, A. Russell, L. Darrow, P. Tolbert, M. Strickland. 2016. Pediatric Emergency Department Visits and Ambient Air Pollution in the U.S. State of Georgia: A Case-Crossover Study. *Environ. Health*. 15:115. doi: 10.1186/s12940-016-0196-y. PMCID: PMC5124302.
24. J. Belle* 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. S. Archer-Nicholls, E. Carter, R. Kumar, Q. Xiao*, **Liu Y**, J. Frostad, M. Forouzanfar, A. Cohen, M. Brauer, J. Baumgartner, and C. Wiedinmyer. 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.
30. 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.
31. 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.
32. G. Snider, C.L. Weagle, K.K. Murdymootoo, A. Ring, Y. Ritchie, A. Walsh, C. Akoshile, N.X. Anh, J. Brook, F.D. Qonitan, J. Dong, D. Griffith, K. He, B.N. Holben, R. Kahn, N. Lagrosas, P. Lestari, Z. Ma, A. Misra, E. Quel, A. Salam, B. Schichtel, L. Sergev, S.N. Tripathi, C. Wang, C. Yu*, Q. Zhang, Y. Zhang, M. Brauer, A.

- Cohen, M.D. Gibson, **Liu Y**, J.V. Martins, Y. Rudich, and R.V. Martin. 2016. Variation in Global Chemical Composition of PM_{2.5}: Emerging Results from SPARTAN. *Atmos Chem Phys*. 16: 9629-9653, doi:10.5194/acp-16-9629-2016.
33. S. Li*, C. Yu*, L Chen, J. Tao, W Ge, Y. Si, **Liu Y**. 2016. Inter-comparison of model-simulated and satellite-retrieved componential aerosol optical depths in China. *Atmos. Env.* 92-93: 416-421, DOI: 10.1016/j.atmosenv.2016.06.075.
 34. 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*. DOI: 10.4209/aaqr.2015.03.0173.
 35. B. Alman, G. Pfister, H. Hao, J. Stowell, X Hu, **Y Liu**, M. Strickland. 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.
 36. C. Liu, R. Chen, X. Meng, Z. Ma, **Liu Y**, Y. Wang, Y. Zhao, H. Kan. 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.
 37. M. Russell*, J. Belle*, **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.
 38. Z. Ma*, **Liu Y**, Q. Zhao, M. Liu, Y. Zhou, J. Bi. 2016. Estimating high resolution PM_{2.5} concentrations in Yangtze Delta Region of China using an improved linear mixed effect model. *Atmos. Environ.* 133:156-164, DOI:10.1016/j.atmosenv.2016.03.040.
 39. K. Chen, L. Zhou, X. Chen, Z. Ma, **Liu Y**, L. Huang, J. Bi, P. Kinney. 2016. Urbanization level and vulnerability to heat-related mortality in Jiangsu Province, China. *Environ Health Perspect*. <http://dx.doi.org/10.1289/EHP204>.
 40. M. Zhong, E. Saikawa, **Liu Y**, V. Naik, L. Horowitz, M. Takigawa, Y. Zhao, N. Lin, and E. Stone. 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, DOI:10.5194/gmd-9-1201-2016.
 41. X. Hu*, C. Yu*, D. Tian, M. Ruminiski, K. Robertson, L. Waller, **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, doi:10.1002/2015JD024448.
 42. Q. Xiao*, H. Zhang, M. Choi, S. Li*, S. Kondragunta, J. Kim, B. Holben, R. C. Levy, **Liu Y**. 2016. Evaluation of VIIRS, GOCl, and MODIS Collection 6 AOD retrievals against ground sunphotometer measurements over East Asia. *Atmos Chem Phys*. 16(3), 1255-1269, DOI:10.5194/acp-16-1255-2016.
 43. L. Huang, J. Chen, L. Zhou, K. Chen, **Liu Y**, X. Chen, F. Tang. 2016. Acute Effects of Air Pollution on Influenza-like Illness in Nanjing, China: A Population-based Study. *Chemosphere*. 147, 180-187, DOI:<http://dx.doi.org/10.1016/j.chemosphere.2015.12.082>. PMID: 26766354.
 44. M. Girguis, M. Strickland, X Hu, **Y Liu**, S. Bartell, V. Vieira. 2015. Maternal Exposure to Traffic-Related Air Pollution and Birth Defects in Massachusetts. *Environ. Res.* 146, 1-9, DOI:<http://dx.doi.org/10.1016/j.envres.2015.12.010>. PMID: 26705853, PMCID: PMC4761511.
 45. M. Brauer, G. Freedman, J. Frostad, A. van Donkelaar, R. Martin, F. Dentener, R. van Dingenen, K. Estep, H. Amini, J. Apte, K. Balakrishnan, L. Barregard, D. Broday, V. Feigin, S. Ghosh, P. Hopke, L. Knibbs, Y. Kokubo, **Liu Y**, S. Ma, L. Morawska, J. Luis, T. Sangrador, G. Shaddick, H. Anderson, T. Vos, M. Forouzanfar, R. Burnett, A. Cohen. 2016. Ambient Air Pollution Exposure Estimation for the Global Burden of Disease 2013. *Environ. Sci. Technol.* 50(1), 79-88, DOI:10.1021/acs.est.5b03709. PMID: 26595236.

46. J. Xu, R. V. Martin, A. van Donkelaar, J. Kim, M. Choi, Q. Zhang, G. Geng, **Liu Y**, Z. Ma, L. Huang, Y. Wang, H. Chen, H. Che, P. Lin, and N. Lin. 2015. Estimating ground-level PM_{2.5} 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.
47. 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.
48. 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. *Environmental Pollution*. 208, 177-184, DOI:10.1016/j.envpol.2015.09.042. PMID: 26499934.
49. 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.
50. 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.
51. 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.
52. Zheng Y, Zhang Q, **Liu Y**, Geng G, He K. 2015. Estimating ground-level PM_{2.5} concentrations over three megalopolises in China using satellite-derived aerosol optical depth measurements. *Atmospheric Environment*. DOI:10.1016/j.atmosenv.2015.06.046.
53. 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 PM_{2.5} Concentrations: China, 2004 - 2013. *Environ Health Perspect*. 124:184-192, DOI:10.1289/ehp.1409481. PMID:26220256, PMCID:PMC4749081.
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Peer-reviewed Research Report

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

Book Chapters

1. Contributing author to Chapter 6: Data Discovery, Access and Retrieval. *ISPRS Book series: Environmental tracking for public health surveillance*. S. Morain and A. Budge (eds). 2013 Taylor & Francis Group, London, ISBN 978-0-415-58471-5.
2. Contributing author to Chapter 3: Human Health and Climate Change in the Southeast USA. *The National Climate Assessment Regional Technical Input Series: Climate of the Southeast United States*. K. Ingram, K. Dow, L. Carter, and J. Anderson (eds.). Island Press, Washington, DC, ISBN 978-1-61091-439-0.

Other Scholarly Contributions

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

Manuscripts Under Review (Student/postdoc authors indicated with an asterisk)

1. G. Snider , C. L. Weagle , P. Bissonnette, N. Chisholm, R. Latimer, C. Akoshile, N. Anh , R. Balasubramanian, J. Brook, F. D. Qonitan, J. Dong, D. Griffith, K. He, B. N. Holben, R. Kahn, J. Kim, N. Lagrosas, P. Lestari, Z. Ma, A. Misra, L. K. Norford, E. J. Quel, A. Salam, B. Schichtel, L. Segev, S.N. Tripathi, C. Wang, C. Yu, Q. Zhang, Y. Zhang, M. Brauer, A. Cohen, M. D. Gibson, Liu Y, J. V. Martins, Y. Rudich, R. V. Martin. Large Variations Measured Worldwide in Airborne Metal Concentrations Driven by Anthropogenic Sources. *Environ Sci Technol*. Submitted.
2. G. Li, J. Huang, Liu Y, J. Huang, G. Xu, X. Qian, Z. Cen, X. Pan, A. Xu, X. Guo, T. He. Future projections for temperature-related years of life lost of cardiovascular diseases in the elderly in a typical subtropical climate city, China. *Environ. Health. Perspect*. Submitted.
3. X. Meng, M. Garay, D. Diner, J. Xu, **Liu Y**. Estimating PM2.5 speciation concentrations using prototype 4.4 km-resolution MISR aerosol properties over Southern California. *Atmos Environ*. Submitted.
4. L. Huang, J. Chen, Y. Zhou, J. Hammitt, X. Lu, J. Bi, **Liu Y**. The changing risk perception towards nuclear power in China after the Fukushima Nuclear Accident. *Energy Policy*. Submitted.
5. H. Holmes, H. Chang, **Liu Y**, J. Mulholland, and A. Russell. Spatiotemporal ambient PM2.5 characterization for health studies: Comparison of data fusion techniques using observations, chemical transport models, and satellite retrievals. *Air Quality, Atmosphere and Health*. Submitted.
6. R. Khalili, S. Bartell, X. Hu, **Liu Y**, H. Chang, C. Belanoff, M. Strickland, V. Vieira Early-life Exposure to PM2.5 and Risk of Acute Asthma Clinical Encounters among Children in Massachusetts: A Case-Crossover Analysis. *Sci Total Environ*. Submitted.
7. J. Chen, L. Huang, W. Bao, H. Wu, K. Chen, S. Guanpeng Dong, **Liu Y**. Risk perception of heat waves and its spatial distribution in Nanjing, China. *Int. J. Environ. Res. Publ. Health*. submitted.
8. J. Belle, H. Chang, Y. Wang, X. Hu, A. Lyapustin, Liu Y. The potential impact of satellite-retrieved cloud parameters on ground-level PM2.5 mass and composition. *Int J Environ Res Public Health*. Submitted.
9. F. Liang, Q. Xiao, Y. Wang, A. Lyapustin G. Li, X. Pan, Liu Y. MAIAC-based Long-term Spatiotemporal Trends of PM2.5 in Beijing, China. *Sci Total Environ*. Submitted.
10. Y. Huang, M. Liu, Y. Li, K. Chen, M. J. Jantunen, P. L. Kinney, Liu Y, S. Sarnat, J. Bi. Acute effects of air pollution on hospital outpatient visits for respiratory diseases in Nanjing, China. *Sci Rep*. Submitted.

PRESENTATIONS

Invited Presentations

1. Liu Y. Estimating PM_{2.5} Components Using Satellite Data and Introduction to MAIA. **The Desert Research Institute**. Reno, NV, September 14, 2017.
2. Liu Y. High-resolution characterization of PM_{2.5} exposure in China at the regional and national scales. **The 1st China Conference on Environment and Health (CCEH 2017)**. Beijing, China, August 24-26, 2017.
3. Liu Y. Estimating PM_{2.5} speciation concentrations using prototype 4.4 km-resolution MISR aerosol properties over Southern California. **A&WMA's 110th Annual Conference & Exhibition**. Pittsburgh, PA, June 5-8, 2017.
4. 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.
5. Liu Y. The application of satellite-based PM_{2.5} exposure models in China. **The National Center for Cardiovascular Diseases of China**. Beijing, China, March 1, 2017.
6. Liu Y. Recent development of the applications of satellite remote sensing in PM_{2.5} retrieval. **China National Institute of Environmental Health Sciences**. Beijing, China, December 14, 2016.
7. Liu Y. The future of satellite remote sensing in retrieving PM_{2.5} in China. **The 1st China Eco-Development Forum**, Beijing, China, December 5 – 7, 2016.
8. 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.
9. 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.
10. Liu Y. Satellite Applications in the Monitoring and Modeling of Atmospheric Aerosols. **Second Suomi NPP Applications Workshop**, Huntsville, Alabama, November 18-20, 2014.
11. 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.
12. 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.
13. Liu Y. Satellite-Predicted High-Resolution PM_{2.5} Maps in the Southeastern U.S. **Work-In-Progress Webinar for the Clean Air Research Centers**, U.S. EPA. May 14, 2014
14. 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.
15. 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.
16. 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.
17. Liu Y. Enhancing EPHT with Satellite-Driven PM_{2.5} Exposure Modeling and Epidemiology. **URISA's Fourth GIS in Public Health Conference**, Miami, FL, June 17 - 20, 2013.

18. 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.
19. 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.
20. Liu Y. Estimating PM Population Exposure from Satellite Data, **Environmental Forum, Nanjing University, School of Environment**, China, December 22, 2011.
21. **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.
22. **Liu Y**, Hu X, and Waller L. Estimating Ground Level PM_{2.5} Concentrations in Atlanta Metro Area Using Spatial Statistical Models, **Goldschmidt2011**, Prague, Czech Republic, August 14-19, 2011.
23. Liu Y. Estimating PM Exposure with Satellite Remote Sensing. **HEI's 2011 Annual Conference**, Boston, MA, May 2, 2011.
24. 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.
25. **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.
26. Liu Y. Applications of Satellite Remote Sensing Data in Air Pollution and Public Health Research. **Tsinghua University, Department of Environmental Sciences and Engineering**, October 15, and **Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences**, Beijing, China, October 18, 2009.
27. 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.
28. Liu Y. Estimating PM_{2.5} Component Concentrations Using MISR Aerosol Microphysical Properties. **MISR Science Team Meeting**, Pasadena, CA, December 11, 2008.
29. 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.
30. **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.
31. **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.
32. **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.
33. 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.

34. 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.
35. 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.
36. 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.
37. Liu Y. Estimating PM_{2.5} Concentrations by Combining MISR AOT with GEOS-CHEM Aerosol Simulations, **24th Annual AAAR Conference**, Austin, TX, October 17, 2005.

Presentations in Professional Meetings (Student/postdoc authors indicated with an asterisk)

1. Liu Y., X. Meng, D. Diner, and M. Garay. Estimating particle speciation concentrations using MISR retrieved aerosol properties in southern California. **American Geophysical Union Fall Meeting**, San Francisco, CA, December 12-16, 2016.
2. Liu Y. Improving satellite-retrieved aerosol microphysical properties using GOCART Data. **ISES Annual Meeting**. Henderson, NV, October 18-22, 2015.
3. Liu Y. A High-Resolution Two-Stage Satellite Model to Estimate PM_{2.5} Concentrations in China. **American Geophysical Union Fall Meeting**, San Francisco, CA, December 14-19, 2014.
4. Belle J*, Liu Y. In-Depth Evaluation of MODIS C6 AOD Parameters over the CONUS (poster). **American Geophysical Union Fall Meeting**, San Francisco, CA, December 14-19, 2014.
5. 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). **American Geophysical Union Fall Meeting**, San Francisco, CA, December 14-19, 2014.
6. 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.
7. Liu Y. SCAPE Report: Development of Satellite-driven PM_{2.5} Models in the Southeastern US. **U.S. EPA Clean Air Research Centers Annual Meeting**, Atlanta, GA. September 18-19, 2014.
8. Li S*, Chin M, Garay M, Chen L, Liu Y. Improving MISR-retrieved aerosol properties using GOCART. **American Geophysical Union Fall Meeting**, San Francisco, CA, December 9-13, 2013.
9. 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. **American Geophysical Union Fall Meeting**, San Francisco, CA, December 9-13, 2013.
10. 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.
11. Hu X*, **Liu Y.** A Time Series Analysis of PM_{2.5} Concentrations in the Southeastern U.S. Using MAIAC AOD in a Two-stage Spatial Statistical Model. **Conference of ISEE, ISES and ISIAQ**, Basel, Switzerland, August 19 - 23, 2013.

12. **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.
13. **Liu Y**, Li S, Szykman J, Schichtel B. Satellite-Observed Trend in PM2.5 Sulfate Levels in the U.S. and its Surrounding Areas. **American Geophysical Union Fall Meeting**, San Francisco, CA, December 2, 2012.
14. 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.
15. Hu X*, and **Liu Y.** Estimating Ground-Level PM2.5 Concentrations in the Southeastern U.S. using MAIAC AOD Retrievals, **American Geophysical Union Fall Meeting**, San Francisco, CA, December 4, 2011.
16. Li S*, Chen L, and **Liu Y.** Retrieval of the Haze Optical Thickness in North China Plain using MODIS data, **American Geophysical Union Fall Meeting**, San Francisco, CA, December 4, 2011.
17. **Liu Y**, Greenwald R, Sarnat J, Szykman J, Russell T. Intensive Synchronized PM Ground Sampling During the DISCOVER-AQ Campaign, **American Geophysical Union Fall Meeting** (poster), San Francisco, CA, December 4, 2011.
18. 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).
19. **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 **American Geophysical Union Fall Meeting** (poster), San Francisco, CA, December 15, 2010.
20. Hu X*, Waller L, **Liu Y.** Estimating Ground Level PM2.5 Concentrations in Atlanta Metro Area Using Geographically Weighted Regression, **American Geophysical Union Fall Meeting**, San Francisco, CA, December 15, 2010. (poster)
21. 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 International Society of Exposure Science & International Society for Environmental Epidemiology**, Seoul, Korea, August 31, 2010.
22. 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.
23. 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.
24. **Liu Y.** Enhancing Environmental Public Health Tracking With Satellite-driven Particle Exposure Modeling And Epidemiology, **American Meteorological Society Annual Meeting**, Atlanta, GA, January 19, 2010.
25. **Liu Y.** Estimating Particle Sulfate Concentrations Using MISR Aerosol Properties, **National Environmental Public Health Conference**, Atlanta, GA, October 26, 2009.
26. **Liu Y**, Schichtel B, Koutrakis P, Estimating SO4 Concentrations Using MISR Retrieved Aerosol Properties, **GEOS-Chem User Meeting**, Cambridge, MA, April 8, 2009.

27. **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.
28. **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.
29. **Liu Y**, Paciorek P, Estimating PM_{2.5} Exposure Using Satellite Remote Sensing, Meteorology, and Land Use Information, **ISEA / ISEE Joint Annual Conference**, Pasadena, CA, October 16, 2008.
30. Paciorek C, **Liu Y**, Macias H, Kondragunta S. Spatio-Temporal Associations of MISR and GOES AOD with Ground-Level PM_{2.5} Concentrations in Eastern US, **American Geophysical Union Fall Meeting**, San Francisco, CA, December 12, 2007.
31. **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.
32. **Liu Y**. A Fractional AOD Approach to Derive PM_{2.5} Information Using MISR Data Coupled with GEOS-CHEM Aerosol Simulation Results, **the 3rd GEOS-Chem User Meeting**, Cambridge, MA, April 11, 2007.
33. **Liu Y**, Kahn R, Turquety S, Yantosca R, Koutrakis P. Estimating PM_{2.5} Speciation and Size Distributions Using MISR Retrieved Aerosol Microphysical Properties, **MISR user science symposium**, Pasadena, CA, December 6, 2006.
34. 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.
35. **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.
36. **Liu Y**. Improving Ambient Fine Particle Pollution Monitoring with MISR Aerosol Product, the **MISR Science Team meeting**, Pasadena, CA, December 7, 2004.
37. **Liu Y**. The Application of Satellite Remote Sensing in Estimating Fine Particle Concentrations, **MISR Science Team meeting**, Pasadena, CA, December 15, 2003.

TEACHING

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|-------|---|
| 2015 | Emory University, RSPH. EH 540: Environmental Hazards I (Course instructor)
Emory University, RSPH. The Humphrey Fellowship Program (Guest lecture).
Georgia State University, School of Public Health. PH 7155, Air Pollution in the Environment (Guest lecture) |
| 2011- | Emory University, RSPH. EH587: Introduction to Satellite Remote Sensing of the Environment and Its Applications in Public Health (Course instructor). |
| 2013 | Emory University, RSPH. EH515: Air Quality in the Urban Environment: A Survey of Research methods and Recent Findings (Guest lecture) |
| 2013- | Emory University, RSPH. HLTH38-EH590: Genome, Exposome, and Health (Guest lecture) |
| 2011- | Emory University, RSPH. EH582: Global Climate Change: Health Impacts and Response (Guest lecture) |

- 2010 Emory University, Center for Faculty Development and Excellence, the Institute for Pedagogy in the Liberal Arts Conference on Teaching Methods and Technology (Participant)
- 2009-2010 Emory University, RSPH, EH 590R: Environmental Health Journal Club, (Guest lecture)
- 2008 Harvard University, School of Public Health & Cyprus International Institute, EH297, Atmospheric Environment Seminars (Guest lecturer)
- 2006 Harvard University, School of Public Health, ID 215, Environmental and Occupational Epidemiology (Discussion leader)
- 2002 Harvard University, School of Engineering and Applied Sciences, ES 168, Aquatic Chemistry (Teaching Fellow)
- 1996 Tsinghua University, School of Environment, Engineering Design of Domestic Wastewater Treatment Plants (Teaching Assistant).

Postdoctorates

- In training Xuefei Hu
Xia Meng
Guannan Geng
- Completed Shenshen Li
Youngmin Kim
Cindy Young

Doctoral Dissertation Committee

- Active Jianzhao Bi (Emory, RSPH, Dept. of Environmental Health), chair
Jessica Bell (Emory, RSPH, Dept. of Environmental Health), chair
Qingyang Xiao (Emory, RSPH, Dept. of Environmental Health), chair
Jennifer Stowell (Emory, RSPH, Dept. of Environmental Health), chair
Heather Strosnider (Emory, RSPH, Dept. of Environmental Health), committee member
Mariel Friberg (Georgia Tech, Dept. of Civil and Environmental Engineering), committee member
- 2017 Fengchao Liang (Peking University, Health Science Center), committee member
- 2016 Brooke Alhanti (Emory, RSPH, Dept. of Biostatistics and Bioinformatics), committee member
- 2015 Zongwei Ma (Nanjing University, School of Environment, China), committee member
Xia Meng (Fudan University, School of Public Health, China), committee member
- 2014 Chao Yu (Chinese Academy of Sciences, RADI, China), committee member
- 2012 Jason Vargo (Georgia Tech), committee member

Master's Thesis Committee at Emory

- 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
- 2013 Xueying Zhang (EPI), Field advisor; Elizabeth Ervin (EH), Chair; Christina Wu (EH), Chair
Takahiro Goto (EH), Chair
- 2012 Rahul Gondalia (EH), Chair; Deanna Kristine Tollefson (EH), Chair

Visiting Students

- 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

2015- University Senate Committee on the Environment (member)
2013- RSPH Committee on Community and Diversity (member)
2011-2012 RSPH IT Advisory Committee (member)
2009- RSPH Shepard Award Committee (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

2016- Associate editor, *Journal Of Exposure Science And Environmental Epidemiology*
2013- Associate editor, *Frontiers in Environmental Science*
2016- Guest editor, *Remote Sensing*, special issue on Remote Sensing of Atmospheric Pollution
2014- Guest editor, *Advances in Meteorology*, special issue on Atmospheric Compositions: Satellite Observation and Applications on Air Quality and Climate Study

Expert Panel

2014- Global Burden of Disease Expert, Ambient Particulate Matter Pollution
2013- Scientific Steering Group member, WHO Department of Public Health and Environment, Global Platform on Air Quality and Health Project

Conference Organization

2017 Co-chair of session "A071. Multi-sensor, Model, and Measurement Synergy: Regional-to-Global Aerosol Change Detection, and Observed Changes" in the 2017 AGU annual meeting, December 11 – 15, New Orleans, Louisiana.
2013 Co-chair of symposium "Remote sensing approaches to estimate air pollution exposure for disease burden and epidemiology" in the Conference of ISEE, ISES and ISIAQ, August 19 -24, Basel, Switzerland
2011 Co-chair of symposium "the applications of satellite remote sensing in air pollution exposure sciences and environmental health research and practice" in the ISES 2011 annual meeting, October 23-27, 2011, Baltimore, MD.
Co-host of pre-conference workshop "*Applications of Satellite Remote Sensing in Air Pollution Exposure Science*" in the ISES 2011 annual meeting, October 23-27, 2011, Baltimore, MD.

Peer Review Activities for Funding Agencies

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

- 2017 Ad hoc reviewer for the Health Effects Institute
- 2015 Ad hoc reviewer for the U.S. EPA RFA EPA-G2014-STAR-K1: Air Pollution Monitoring for Communities
- 2014 Ad hoc reviewer for the Health Effects Institute, and the National Science Foundation (AGS - GEO/ATM - Atmospheric Chemistry)
- 2014, 2015 Ad hoc reviewer for Environmental and Health Fund, Israel
- 2013 Ad hoc reviewer for the Special Emphasis Panel for NIH R21 proposals responding to "PAR-10-235: Climate Change and Health"
- 2012 Ad hoc reviewer for NIH R01 proposals responding to RFA-ES-11-013: the Centers for Oceans and Human Health, and the Oceans, Great Lakes, and Human Health
- 2010 Ad hoc reviewer for NASA Applied Science Program (ROSES 2010), the Canadian Natural Sciences and Engineering Research Council (NSERC) and the Canadian Institutes of Health Research (CIHR)

Peer Review Activities for Journals

- 2004- 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; Environmental Health; Environmental Health Perspectives; Environmental Research; Environmental Science and Technology; Epidemiology; Frontiers of Medicine; Geophysical Research Letters; International Journal of Health and Geographics; International Journal of Environmental Research and Public Health; Journal of Aerosol Science; Journal of Geophysical Research – Atmosphere; Journal of Applied Meteorology & Climatology; Journal of Applied Remote Sensing; Journal of Environmental Management; Journal of the Air & Waste Management Association; Remote Sensing; Nature Geoscience; Remote Sensing of Environment; Science Bulletin; Science of the Total Environment; Scientific Reports.*
- 2013 Co-chair of symposium " Remote sensing approaches to estimate air pollution exposure for disease burden and epidemiology" in the Conference of ISEE, ISES and ISIAQ, August 19 -24, Basel, Switzerland
- 2011 Co-chair of symposium "the applications of satellite remote sensing in air pollution exposure sciences and environmental health research and practice" in the ISES 2011 annual meeting, October 23-27, 2011, Baltimore, MD
Co-host of pre-conference workshop "*Applications of Satellite Remote Sensing in Air Pollution Exposure Science*" in the ISES 2011 annual meeting, October 23-27, 2011, Baltimore, MD

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS AND SOCIETIES

- 2014 – NASA Aura satellite, science team member
- 2012 – 2014 NASA Applied Remote SEnsing Training (*ARSET*) team member
- 2011 – 2017 NASA Air Quality Applied Science Team member
- 2008 – NASA Terra satellite, MISR science team member
- 2008 – International Society of Exposure Science (ISES)
- 2004 – American Geophysical Union (AGU)
- 2010 – 2011 American Meteorological Society (AMS)
- 2005 – 2006 American Association for Aerosol Research (AAAR)
- 2007 Science Advisor to NASA DEVELOP student team
- 2007 – 2013 Global Science Advisor for Earth & Sky, National Public Radio