

August 11, 2020

ERI SAIKAWA

Department of Environmental Sciences, Emory College
Gangarosa Department of Environmental Health, Rollins School of Public Health
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Atlanta GA, 30322
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PROFESSIONAL EXPERIENCE

Emory University - Atlanta, GA, United States

Associate Professor September 2018 to Present

Assistant Professor January 2013 to August 2018

- Department of Environmental Sciences, Director of Graduate Studies
- Joint appointment with the Rollins School of Public Health, Gangarosa Department of Environmental Health
- Affiliated faculty in the Institute for Quantitative Theory and Methods (QuanTM), the East Asian Studies Program, and the Center for the Study of Law, Politics and Economics (CSLPE)

China Research Center - Atlanta, GA, United States

Associate October 2014 to Present

Massachusetts Institute of Technology - Cambridge, MA, United States

Visiting Research Affiliate January 2013 to Present

Research Scientist July 2012 to December 2012

Postdoctoral Associate October 2010 to June 2012

- Center for Global Change Science, Department of Earth, Atmospheric, and Planetary Sciences
- Affiliated with the Joint Program on the Science and Policy of Global Change
- Postdoctoral Advisor: Prof. Ronald G. Prinn

EDUCATION

Princeton University - Princeton, NJ, United States **September 2005 – September 2010**

Ph.D., Program in Science, Technology and Environmental Policy, Woodrow Wilson School of Public and International Affairs

- General Examinations: Atmospheric Chemistry and International Relations
- Dissertation Title: “Policy Diffusion of Emission Regulations for On-Road Vehicles: Causes and Benefits for Air Quality”
- Dissertation Committee Members: Profs. Denise Mauzerall, Christina Davis, Gilbert Rozman, and Michael Oppenheimer (examiner)

Indiana University - Bloomington, IN, United States

August 2003 – May 2005

Master of Public Affairs, School of Public and Environmental Affairs

Overall GPA: 3.92

- Concentration in *Environmental Policy and Natural Resource Management*

University of Tokyo - Tokyo, Japan

April 1999 – March 2003

Bachelor of Engineering: Chemistry and Biotechnology

Overall GPA: 3.75 Major GPA: 3.81 (GPA is calculated based on grades A, B, C, or D only, no +/-)

- Thesis Title: “Design of Supramolecular Structures Using the Interaction between Fullerene and Metalloporphyrine”

PEER-REVIEWED PUBLICATIONS (Group members underlined)

Journal Articles (h-index: 22, i10-index: 26)

40. **E. Saikawa**, Q. Wu, M. Zhong, A. Avramov, K. Ram, C. E. Stockwell, T. Jayarathne, E. Stone, A. Panday and R. J. Yokelson, Garbage burning in South Asia – how important is it to the regional air quality?, *Environmental Science and Technology*, doi:10.1021/acs.est.0c02830.
39. Ye, W., **E. Saikawa**, A. Avramov, S.-H. Cho, and R. Chartier, Household Air Pollution and Personal Exposure from Burning Firewood and Yak Dung in the Eastern Tibetan Plateau, *Environmental Pollution*, 263, doi:10.1016/j.envpol.2020.114531, 2020.
38. Balotin, L., S. Distler, A. Williams, S. Peters, G. Frank, C. Theal, T. Alvarado, Hernandez, A. Hines, and **E. Saikawa**, Analysis of Atlanta Residents' Knowledge Regarding Heavy Metal Exposures Associated with Urban Agriculture, *International Journal of Environmental Research and Public Health*, 17(6), doi:10.3390/ijerph17062069, 2020.
37. Peters, S., **E. Saikawa**, N. Hill, A. Avramov, K. Wakabayashi, B. A. Yosen, L. Sutter, D. Markowitz, Soil Trace Gas Fluxes in Living Mulch and Traditional Agricultural Systems, *Journal of Environmental Quality*, 49, 268-280, 2020.
36. Hunter, C. M., D. H. Z. Williamson, M. Pearson, **E. Saikawa**, M. O. Gribble, M. Kegler, Safe Community Garden. Practices: Focus Groups with Garden Leaders in Atlanta, Georgia, *Local Environment*, 25 (1), 18-35, doi: 10.1080/13549839.2019.1688268, 2020.
35. Stowell, J. D., G. Geng, **E. Saikawa**, H. H. Chang, J. Fu, C.-E. Yang, Q. Zhu, Y. Liu, and M. J. Strickland, Associations of Wildfire Smoke PM_{2.5} Exposure with Cardiorespiratory events in Colorado 2011-2014, *Environment International*, 133, 105151, 2019.
34. Sclar, S. and **E. Saikawa**, Household Air Pollution in a Changing Tibet: A Mixed Methods Ethnography Amidst Particulate Matter and Black Carbon, *Environmental Management*, 64 (3), 353-365, 2019.
33. Chen, C., **E. Saikawa**, B. Comer, X. Mao, and D. Rutherford, Ship Emission Impacts on Air Quality and Human Health in the Pearl River Delta (PRD) region, China in 2015, with Projections to 2030, *GeoHealth*, doi: 10.1029/2019GH000183, 2019.
32. Nam, K.-M., X. Zhang, M. Zhong, **E. Saikawa**, and X. Zhang, Health Effects of Ozone and Particulate Matter Pollution in China: A Province-level CGE Analysis, *The Annals of Regional Science*, doi: 10.1007/s00168-019-00924-z, 2019.
31. Hunter, C. M., D. H. Z. Williamson, M. O. Gribble, H. Bradshaw, M. Pearson, **E. Saikawa**, P. B. Ryan, and M. Kegler, Perspectives of Heavy Metal Soil Testing among Community Gardeners in the United States: A Mixed Methods Approach, *International Journal of Environmental Research and Public Health*, 16 (13), 2350, 2019.
30. Zhong, M., **E. Saikawa**, A. Avramov, C. Chen, J. Sun, W. Ye, W. C. Keene, R. J. Yokelson, T. Jayarathne, E. A. Stone, Maheswar Rupakheti, and A. K. Panday, Emissions from vehicles and brick kilns and their impacts on air quality in the Kathmandu Valley, Nepal, *Atmospheric Chemistry and Physics*, 19, 8209-8228, 2019.
29. Shang, Z., F. Zhou, P. Smith, **E. Saikawa**, P. Ciais, J. Chang, H. Tian, S. J. Del Grosso, A. Ito, M. Chen, Q. Wang, Y. Bo, X. Cui, S. Castaldi, R. Juszczak, A. Kasimir, V. Magliulo, S. Medinets, V. Medinets, B. Rees, G. Wohlfahrt, S. Sabbatini, Weakened growth of cropland N₂O emissions in China associated with nationwide policy interventions, *Global Change Biology*, 25, doi:10.1111/gcb.14741, 2019.
28. Tian, H., J. Yang, R. Xu, C. Lu, J. G. Canadell, E. Davidson, R. B. Jackson, A. Arneeth, J. Chang, P. Ciais, S. Gerber, A. Ito, F. Joos, S. Lienert, P. Messina, S. Olin, S. Pan, C. Peng, **E. Saikawa**, N. Vuichard, S. Zaehle, and B. Zhang, Global soil N₂O emissions estimated by an ensemble of Terrestrial Biosphere Models during 1861-2016: Magnitude, attribution and uncertainty, *Global Change Biology*, 25 (2), 640-659, 2019.
27. Bhattarai, H., **E. Saikawa**, X. Wan, H. Zhu, K. Ram, S. Gao, S. Kang, Q. Zhang, Y. Zhang, G. Wu, X. Wang, K. Kawamura, P. Fu, and Z. Cong, Levoglucosan as a tracer of biomass burning: Recent Progress and perspectives, *Atmospheric Research*, 220, 20-33, 2019.
26. Grecequet, M., **E. Saikawa**, and J. J. Hellmann, Select but diverse countries are reducing both climate vulnerability and CO₂ emissions, *Elem Sci Anth*, 7(1), p. 4, 2019.

25. Zhong, M., F. Chen, and E. Saikawa, Sensitivity of projected PM_{2.5}- and O₃-related health impacts to model inputs: A case study in mainland China, *Environment International*, 123, 256-264, 2019.
24. Nevison, C., A. Andrews, K. Thoning, E. Dlugokencky, C. Sweeney, **E. Saikawa**, J. Benmergui, S. Miller, M. Fischer, M. Mountain, and T. Nehrkorn, Nitrous oxide emissions estimated with the Carbon Tracker Lagrange North American regional inversion framework, *Global Biogeochem. Cycles*, doi:10.1002/2017GB005759, 2018.
23. Tian, H, J. Yang, C. Lu, R. Xu, J. Canadell, R. Jackson, A. Arneeth, J. Chang, G. Chen, P. Ciais, S. Gerber, A. Ito, Y. Huang, F. Joos, S. Lienert, P. Messina, S. Olin, S. Pan, C. Peng, **E. Saikawa**, R. Thompson, N. Vuichard, W. Winiwarter, S. Zaehle, B. Zhang, K. Zhang, Q. Zhu, The global N₂O Model Intercomparison Project (NMIP): objectives, simulation protocol and expected products, *Bull. Amer. Meteor. Soc.*, doi:10.1175/BAMS-D-17-0212.1, 2018.
22. Wells, K., D. Millet, N. Bousserrez, D. Henze, T. Griffis, S. Chaliyakunnel, E. Dlugokencky, **E. Saikawa**, X. Gao, R. Prinn, S. O'Doherty, D. Young, R. Weiss, G. Dutton, J. Elkins, P. Krummel, R. Langenfelds, and P. Steele, Top-down constraints on global N₂O emissions at optimal resolution: application of a new dimension reduction technique, *Atmos. Chem. Phys.*, **18**, 735-756, 2018.
21. Jayarathne, T., C. E. Stockwell, T. J. Christian, P. V. Bhave, C. Rathnayake, Md. Robiul Islam, P. S. Praveen, A. K. Panday, S. Adhikari, R. Maharjan, J. D. Goetz, P. F. DeCarlo, **E. Saikawa**, R. J. Yokelson, and E. A. Stone, Nepal Ambient Monitoring and Source Testing Experiment (NAMaSTE): Emissions of particulate matter from wood and dung cooking fires, brick kilns, generators, trash and crop residue burning, *Atmos. Chem. Phys.*, **18**, 2259-2286, 2018.
20. Martin, G. and E. Saikawa, Effectiveness of state climate and energy policies in reducing power sector CO₂ emissions, *Nat. Clim. Chang.*, doi:10.1038/s41558-017-0001-0, 2017.
19. **Saikawa, E., H. Kim, M. Zhong, A. Avramov, Y. Zhao, G. Janssens-Maenhout, J. Kurokawa, and Q. Zhang**, Comparison of Emissions Inventories of Anthropogenic Air Pollutants in China and their Impacts on Air Quality in Asia, *Atmos. Chem. Phys.*, **17**, 6393-6421, doi:10.5194/acp-17-6393-2017, 2017.
18. **Saikawa, E., M. Trail, Q. Wu, M. Zhong, C. L. Young, G. Janssens-Maenhout, Z. Klimont, F. Wagner, J. Kurokawa, A. Nagpure, and B. Gurjar**, Uncertainties in emissions estimates of greenhouse gases and air pollutants in India and their impacts on regional air quality, *Environ. Res. Lett.*, **12**, 065002, 2017.
17. Kishimoto, P., V. Karplus, M. Zhong, E. Saikawa, X. Zhang, and X. Zhang, The impact of coordinated policies on air pollution emissions from road transportation in China, *Transp. Res. D: Transp. Environ.*, **54**, 34-49, 2017.
16. Stockwell, C., T. Christian, D. Goetz, T. Jayarathne, P. Bhave, P. Praveen, S. Adhikari, R. Maharjan, P. DeCarlo, E. Stone, **E. Saikawa**, D. Blake, I. Simpson, R. Yokelson, and A. Panday, Nepal Ambient Monitoring and Source Testing Experiment (NAMaSTE): Emissions of trace gases and light-absorbing carbon from wood and dung cooking fires, garbage and crop residue burning, brick kilns, and other sources, *Atmos. Chem. Phys.*, **16**, 11043-10081, doi:10.5194/acp-16-11043-2016, 2016.
15. Hossaini, R., P. K. Patra, A. A. Leeson, G. Krysztofiak, N. L. Abraham, S. J. Andrews, A. T. Archibald, J. Aschmann, E. L. Atlas, D. A. Belikov, H. Bönisch, L. J. Carpenter, S. Dhomse, M. Dorf, A. Engel, W. Feng, S. Fuhlbrügge, P. T. Griffiths, N. R. P. Harris, R. Hommel, T. Keber, K. Krüger, S. T. Lennartz, S. Maksyutov, H. Mantle, G. P. Mills, S. A. Montzka, M. A. Navarro, D. E. Oram, K. Pfeilsticker, J. A. Pyle, B. Quack, A. D. Robinson, **E. Saikawa**, et al., A multi-model intercomparison of halogenated very short-lived substances (TransCom-VSLS): linking oceanic emissions and tropospheric transport for a reconciled estimate of the stratospheric source gas injection of bromine, *Atmos. Chem. Phys.*, **16**, 9163-9187, doi:10.5194/acp-16-9163-2016, 2016.
14. Tian, H., C. Lu, P. Ciais, A. M. Michalak, J. G. Canadell, **E. Saikawa**, D. N. Huntzinger, K. R. Gurney, S. Sitch, B. Zhang, J. Yang, P. Bousquet, L. Bruhwiler, G. Chen, E. Dlugokencky, P. Friedlingstein, J. Melillo, S. Pan, B. Poulter, R. Prinn, M. Saunio, C. R. Schwalm, S. C. Wofsy, The terrestrial biosphere as a net source of greenhouse gases to the atmosphere, *Nature*, **531**, 225-228, 2016.

13. **Zhong, M., E. Saikawa**, Y. Liu, V. Naik, L. W. Horowitz, M. Takigawa, Y. Zhao, N.-H. Lin, and E. Z. Stone, Air Quality Modeling with WRF-Chem v3.5 in East Asia: Sensitivity to Emissions and Evaluation of Simulated Air Quality, *Geosci. Model Dev.*, **9**, 1201-1218, 2016.
12. **Xiao, Q., E. Saikawa**, R. Yokelson, P. Chen, C. Li, and S. Kang, Indoor Air Pollution due to Yak Dung Combustion in Nam Co, Tibet, *Atmos. Environ.*, **102**, 406-412, 2015.
11. Thompson, R. L., K. Ishijima, **E. Saikawa**, M. Corazza, U. Karstens, P. K. Patra, P. Bousquet, P. Bergamaschi, F. Chevallier, E. Dlugokencky, R. G. Prinn, R. F. Weiss, S. O'Doherty, P. J. Fraser, L. P. Steele, P. B. Krummel, A. Vermeulen, Y. Tohjima, A. Jordan, L. Haszpra, M. Steinbacher, S. Van der Laan, T. Aalto, F. Meinhardt, M. E. Poppa, J. Moncrieff, and P. Bousquet, TransCom N₂O model inter-comparison Part II: atmospheric inversion estimates of N₂O emissions, *Atmos. Chem. Phys.*, **14**, 6177-6194, doi:10.5194/acp-14-6177-2014, 2014.
10. **Saikawa, E.**, R. G. Prinn, E. Dlugokencky, G. Dutton, B. Hall, K. Ishijima, R. Langenfelds, Y. Tohjima, T. Machida, S. O'Doherty, R. F. Weiss, M. Rigby, S. O'Doherty, P. K. Patra, C. M. Harth, R. F. Weiss, P. B. Krummel, M. van der Schoot, P. J. B. Fraser, L. P. Steele, S. Aoki, T. Nakazawa, and J. W. Elkins, Global and regional emissions estimates for N₂O, *Atmos. Chem. Phys.*, **14**, 4617-4641, doi:10.5194/acp-14-4617-2014, 2014.
9. Thompson, R. L., P. K. Patra, K. Ishijima, **E. Saikawa**, M. Corazza, U. Karstens, C. Wilson, P. Bousquet, P. Bergamaschi, E. Dlugokencky, C. Sweeney, R. G. Prinn, R. F. Weiss, S. O'Doherty, P. Fraser, L. P. Steele, and P. B. Krummel. TransCom-N₂O model inter-comparison Part I: assessing the influence of transport and surface fluxes on tropospheric N₂O variability, *Atmos. Chem. Phys.*, **14**, 4349-4368, doi:10.5194/acpd-14-4349-2014, 2014.
8. **Saikawa, E.** and J. Urpelainen. Environmental Standards as a Strategy of International Technology Transfer. *Environmental Science and Policy*, **38**, 192-206, 2014. (Featured in Science for Environment Policy, April 2014)
7. **Saikawa, E.**, C. A. Schlosser, and R. G. Prinn, Process modeling of global soil nitrous oxide emissions from natural processes. *Global Biogeochem. Cycles*, **27** (3), 972-989, doi:10.1002/gbc.20087, 2013 (Nature Geoscience Research Highlight, October 2013).
6. Zhuang, Q., K. Xu, J. Tang, M. Chen, **E. Saikawa**, Y. Lu, J. M. Melillo, R. G. Prinn, and A. D. McGuire, Responses in global soil consumption of atmospheric methane due to changes in atmospheric climate, methane concentration, and nitrogen deposition. *Global Biogeochem. Cycles*, **27** (3), 650-663, doi:10.1002/gbc.20057, 2013.
5. **Saikawa, E.** Policy Diffusion of Automobile Emission Standards: Is there a Race to the Top? *World Politics*, **65** (1), 1-33, 2013.
4. **Saikawa, E.**, M. Rigby, R. G. Prinn, S. A. Montzka, B. R. Miller, L. J. M. Kuijpers, P. J. B. Fraser, M. K. Vollmer, T. Saito, Y. Yokouchi, C. Harth, J. Mühle, R. F. Weiss, P. Salameh, J. Kim, S. Li, S. Park, K.-R. Kim, D. Young, P. G. Simmonds, A. McCulloch, P. B. Krummel, L. P. Steele, C. Lunder, O. Hermansen, M. Maione, J. Arduini, B. Yao, L. X. Zhou, H. J. Wang, J. W. Elkins, and B. Hall, Global and regional emissions estimate for HCFC-22. *Atmos. Chem. Phys.*, **12**, 10033-10050, doi:10.5194/acp-12-10033-2012, 2012.
3. M. V. Ramana, and **E. Saikawa**. Choosing a Standard Reactor: International Competition and Domestic Politics in Chinese Nuclear Policy. *Energy*, **36** (12), doi:10.1016/j.energy.2011.10.022, 2011.
2. **Saikawa, E.**, J. Kurokawa, M. Takigawa, J. Borken-Kleefeld, D. L. Mauzerall, L. W. Horowitz, T. Ohara, The impact of China's vehicle emissions on regional air quality in 2000 and 2020: a scenario analysis. *Atmos. Chem. Phys.*, **11**, 9465-9484, 2011.
1. **Saikawa, E.**, V. Naik, L. W. Horowitz, J. Liu, D. L. Mauzerall, Present and Potential Future Contributions of Sulfate, Black and Organic Carbon Aerosols from China to Global Air Quality, Premature Mortality and Radiative Forcing. *Atmospheric Environ.*, **43**(17), 2814-22, 2009.

Book chapter

2. **Saikawa, E.**, A. K. Panday, S. Kang, R. Gautam, E. Zusman, Z. Cong, E. Somanathan, B. Adhikary, R. J. Yokelson, J. H. Crawford, M. Rupakheti, W. Ye, Md. G. Saroar, Air Pollution in the Hindu Kush

Himalaya, P. Wester et al. (eds.), “*The Hindu Kush Himalaya Assessment*”, Chapter 10, pp. 339-387, Springer Nature, 2019.

1. **Saikawa, E.** Domestic politics and environmental standards: China’s policy-making process for regulating vehicle emissions, J. Sato (ed.), “*Governance of natural resources: Uncovering the social purpose of materials in nature*”, Chapter 3, pp. 74-97, The United Nations University Press, 2013.

NON-PEER REVIEWED PUBLICATIONS

3. Eil, A., J. Li, P. Baral, and **E. Saikawa**, Dirty Stacks, High Stakes: An Overview of Brick Sector in South Asia, The World Bank, April, 2020.

2. **Saikawa, E.**, China’s Continued War on Air Pollution, *China Current*, **18** (1), 2019.

1. **Saikawa, E.**, China’s War on Air Pollution, *China Current*, **13** (2), 2014.

Book chapter

1. **Saikawa, E.** and N. Selin, “The Impact of China’s Vehicle Emission Regulations on Regional Air Quality and Welfare in 2020” D. Shin (ed.), “*Hazardous Air Pollutants: Case Studies from Asia*”, Part II, Chapter 2, pp. CRC Press, 2016.

UNDER REVIEW/WORKING PAPERS (Group members are underlined)

- Stowell, J., G. Geng, **E. Saikawa**, H. H. Chang, J. S. Fu, C.-En. Yang, Q. Zhu, Y. Liu, and M. J. Strickland, Associations of Wildfire-specific PM_{2.5} Exposure on Cardiorespiratory events in Colorado 2011-2014, *PLOS Medicine*, under review.
- Zhu, Q., L.-M. Cao, M.-X. Tang, X. F. Huang, L.-Y. He, and **E. Saikawa**, Biomass burning as a potential source of atmospheric particulate organonitrates in North China Plain, *Journal of Environmental Sciences*, under review.
- Gao, X., A. Avramov, **E. Saikawa**, and C. A. Schlosser, Emulation of Community Land Model Version 5 (CLM5) to Quantify Sensitivity of Soil Moisture to Uncertain Parameters, *Journal of Hydrometeorology*, revise and resubmit.
- Distler, S. and **E. Saikawa**, Assessing Low-Level Lead Exposure Risk in Atlanta, Georgia, *Scientific Reports*, under review.
- Bergero, C., M. Rich, and **E. Saikawa**, Understanding the Mechanisms Behind the Diffusion of National Renewable Energy Targets, *Energy Policy*, under review.
- Cush, K., K. Koh, and **E. Saikawa**, Impacts of Forest Fires on Southeast Asian Air Quality and Garbage and Agricultural Burning on South. Asian Air Quality, K. P. Vadrevu, C. Justice and T. Ohara eds., *Biomass Burning*, under review.
- Yao, X., P. B. Ryan, D. Barr, P. D’Souza, and E. Saikawa, Phytoremediation of Lead-Contaminated Soil in West Atlanta, *Environmental Science and Technology*, to be submitted.
- Young, C. L., **E. Saikawa**, M. Trail, H. Kim, M. Zhong, Q. Wu, G. Janssens-Maenhout, J. Kurokawa, Q. Zhang, B. Zheng, Z. Klimont, and F. Wagner, More than two gigaton CO₂ inventory disparity for China and India, to be submitted.
- Peters, S. J. W., **E. Saikawa**, P. I. Fernandes, A. Avramov, C. Eduardo, D. Signor, The Effects of Biochar and Intercropping on Soil Trace Gas Fluxes in Semiarid Brazil, to be submitted.
- Peters, S. J. W., W. Yang, G. Frank, P. D’Souza, D. Barr, P. B. Ryan, T. Frederick, S. Chan, R. Hernandez, T. Alvarado, A. Hines, C. Theal, and **E. Saikawa**, Community-Engaged Assessment of Soil Heavy Metal and Metalloid Contamination Under Two Risk Frameworks in Atlanta Urban Growing Spaces, to be submitted.

GRANTS (External)

- United States Department of Agriculture (USDA), \$164,833, January 1, 2018 – December 31, 2020 “Building Soil Health with Living Mulch Cultivation” (co-PI, PI: Nick Hill at the University of Georgia)

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- National Aeronautics and Space Administration (NASA), \$131,729, July 13, 2016 – June 12, 2019 “Use of Soil-Moisture Retrievals to Refine Global Land Trace Gases Emissions and their Climate Feedbacks” (co-PI, PI: Xiang Gao at MIT)
- National Science Foundation (NSF), \$151,212, August 1, 2014 – July 31, 2019 “Collaborative Research: Measurements of Selected Combustion Emissions in Nepal and Bhutan Integrated with Source Apportionment and Chemical Transport Modeling for South Asia” (PI)
- National Oceanic and Atmospheric Administration (NOAA), \$364,786, August 2013 – July 2016 “Assessing the terrestrial and atmospheric nitrogen cycle: Implications for atmospheric chemistry and climate” (PI)
- National Oceanic and Atmospheric Administration (NOAA), \$71,743, August 2013 – July 2016 “Evaluating the relative importance of direct and indirect agricultural N₂O emissions over the United States using forward modeling and atmospheric N₂O and river nutrient data.” (co-PI, PI: Cindy Nevison at National Center for Atmospheric Research)
- China Transportation Grant, Energy Foundation, \$300,000, January, 2013 – February 2015. “An Integrated Assessment of Emissions, Air Quality, Economic, and Health Impacts of Transport Policies in China” (PI)

GRANTS (Internal)

- Emory SVPR Seed Grant Phase I, \$25,000, May 1, 2020 – April 30, 2021, “Chronic Cough Across Races: Understanding and comparing chronic cough symptoms due to air pollution among Chinese and Indian immigrants and the American population living in Atlanta, Georgia” (Co-PI)
- Emory Global Health Institute Faculty Seed Grant, \$25,000, March 15, 2020 – September 15, 2021, “Chronic Cough Across Races: Understanding and comparing chronic cough symptoms due to air pollution among Chinese and Indian immigrants and the American population living in Atlanta, Georgia” (PI)
- Emory University-Nanjing University Global Research Cooperation Funding, \$15,000, March 1, 2020 – February 28, 2022. “Workshop on Air Pollution, Climate Change and Health” (PI)
- Emory Synergy II grant, \$100,000, May 1, 2019 – April 30, 2020, “Building an interdisciplinary research community to strengthen research capacity and training for implementation science” (co-PI)
- The HERCULES Pilot Project Program, \$15,000, April 1, 2019 – March 30, 2020 “Community-Based Assessments of Soil Contamination and Childhood Exposure to Heavy Metals in Atlanta Urban Agriculture” (PI)
- Emory Global Health Institute Multidisciplinary Global Health Seed Grant, \$50,000, July 1, 2018 – December 31, 2019, “Estimating adolescent girls’ exposure to plastic burning in rural households participating in the HAPIN gas stove intervention trial in Jalapa, Guatemala” (co-PI, PI: Lisa Thompson, School of Nursing),
- The HERCULES Pilot Project Program, \$25,000, April 1, 2018 – March 30, 2019 “Community-Based Assessments of Soil Contamination and Childhood Exposure to Heavy Metals in Atlanta Urban Agriculture” (PI)
- Emory University-Yonsei University Global Research Cooperation Funding, \$15,000, March 1, 2018 – February 2019, “Uncertainty quantification of air pollution modelling in East Asia” (PI)
- Emory University Research Council, \$40,000, May 1, 2017 – April 30, 2018, “Assessing Mitigation and Adaptation Potential of Climate-Smart Agriculture in Diverse Agricultural Systems: US-China-Ethiopia” (PI)
- Emory Global Health Institute, \$50,000, July 1, 2015 – December 31, 2016 “Quantifying the Relationship Between Air Pollution Exposure and Childhood Diseases in China” (PI)
- Emory Program to Enhance Research and Scholarship, \$10,000, January 1, 2016 (PI)
- China Partnership Seed Grants, Emory Global Health Institute, \$16,500, January-April, 2013. “Understanding the health burden in Tibetan households” (PI)

FELLOWSHIPS, AWARDS & HONORS

- Emory Williams Distinguished Undergraduate Teaching Award (2019)
- Member, Sigma Xi, The Scientific Research Honor Society (2019 June – current)
- Association for Women Geoscientists Distinguished Lecturer (2015 January – current)
- Emory Office of Sustainability Initiatives Faculty Fellow (2018 Fall – current)
- Emory Global Health Institute Faculty Fellow (2014 Fall – current)
- Multicultural Outreach and Resources at Emory (MORE) Faculty of the Year (May, 2014)
- Emory Sustainability Innovator Award (2014, 2015)
- Invitation to the Workshop on Atmospheric Composition and the Asian summer Monsoon (2013)
- Invitation to DISCCRS (DISsertation initiative for Climate Change ReSearch) VII (October, 2012)
- Invitation to ACCESS (Atmospheric Chemistry Colloquium for Emerging Senior Scientists) XI and Gordon Research Conference on Atmospheric Chemistry (July, 2011)
- Invitation to National Center for Atmospheric Research Advanced Study Program Summer Colloquium (August 2010)
- Fellowship of Woodrow Wilson Scholars, *Woodrow Wilson Foundation* (2008-2010)
- Princeton Energy and Climate Scholar (2009-2010)
- Bradley Fellowship, *The Lynde and Harry Bradley Foundation* (2008-2009) [\$5625]
- Graduate Research Funding, *Center of Health and Wellbeing, Princeton University* (2008) [\$2125]
- Princeton University Graduate Fellowship (2005-2008)
- Dean's Fund for Scholarly Travel, Travel grants for a conference, *Princeton University* (2008, 2009)
- Grants for summer research, *Princeton Institute for International and Regional Studies, Princeton University* (2006, 2007, 2008, 2009) [\$1000, \$1000, \$3000, \$3000]
- Grants for summer research, *Princeton University East Asian Studies Program, Princeton University* (2006, 2007, 2008) [\$500, \$1500, \$500]
- Murata Overseas Scholarship for Graduate Education Abroad (sole winner out of 111 applicants in a national competition, 2003), *Murata Overseas Scholarship Foundation* (2003-2005)
- Member, *The National Scholars Honor Society*, March 2008 to Present
- Member, *Pi Alpha Alpha Honor Society*, March 2005 to Present

OTHER PROFESSIONAL EXPERIENCE

The World Bank - Washington, DC, United States

Short Term Consultant January 2015 to August 2017

- Research air pollution from transport sector in Nepal and Bangladesh.

Princeton University - Princeton, NJ, United States

Research Assistant November 2009 to February 2010, June 2010

- Created a placement statistics exam for a course offered for the Health and Public Policy certificate.

Princeton University - Princeton, NJ, United States

Research Assistant December 2009

- Research Assistant to Prof. Keren Yarhi-Milo on Japan's foreign relations.

Princeton University - Princeton, NJ, United States

Research Assistant February 2008 to November 2008, April 2010

- Research Assistant to Prof. Christina Davis on trade policy.

The World Bank - Beijing, China

Temporary Consultant June 2007 to September 2007

- Researched air pollution from transport sector in China and wrote policy pieces on vehicle emissions.

August 11, 2020

International Institute for Applied Systems Analysis - Laxenburg, Austria

Researcher - Young Scientists Summer Program June 2005 to August 2005

- Researched cost-optimal solution for CO₂ and SO₂ emissions reduction in China as a start-up project for GAINS China.

The World Bank - Washington DC, United States

Temporary Consultant May 2004 to August 2004, December 2004

- Researched four Asian cities (Jakarta, Shanghai, Beijing and Hanoi) on Integrated Air Quality Management. As part of the project, produced four databases and a report outlining knowledge base management for integrated air quality management.

Central Research Institute of Electric Power Industry - Tokyo, Japan

Research Assistant June 2003 to August 2003

- Researched Japan's new renewable energy prospect for the future.

The University of Tokyo - Tokyo, Japan

Proofreader June 2003 to August 2003

- Supervised the translation into Japanese of the book titled "Why Governments Waste Natural Resources" by William Ascher.

TEACHING EXPERIENCE

Emory University - Atlanta, GA, United States

Courses Taught - All the courses, except ENVS 324, are developed by myself and with the co-instructor(s), when applicable. I made the ENVS 324 cross-listed with ECON 385.

- Air Pollution and Climate Change (ENVS 385) – Fall 2013
- Research Design and Practice (ENVS 460) – Fall 2013 with Gonzalo Vazquez-Prokopek
- Ecological Economics (ENVS 324/ECON 385) – Spring 2014, Spring 2015
- Environmental Economics (ENVS 324/ENVS 524) – Spring 2019
- Global Change Sciences (ENVS 385) – Fall 2014
- Research Design (ENVS 560) – Fall 2015 with Gonzalo Vazquez-Prokopek
- Understanding Climate Change at the 2015 United Nations Meeting in France (ENVS 385/BUS 385/IDS 385) – Fall 2015 with Wesley Longhofer and Sheila Tefft
- Understanding Climate Change at the 2015 United Nations Meeting in France (ENVS 385/BUS 385/IDS 385) – Spring 2016 with Sheila Tefft
- Introduction to Atmospheric Chemistry (ENVS 328/CHEM 328) – Spring 2016, Spring 2017, Spring 2018, Spring 2020
- Climate Change and Society (ENVS 326/ENG 380/ENVS 585) – Fall 2017, Fall 2018 with Sheila Tefft
- Climate Change and Society: delegation to the UN COP (ENVS 426) – Fall 2017 and Fall 2018 with Sheila Tefft
 - Raised \$38,970 for sending 12 students to Bonn, Germany to observe UN climate change negotiations in 2017.
 - Raised \$43,000 for sending students to Katowice, Poland to observe UN climate change negotiations in 2018.
- Climate Change and Society (ENVS 326/ENVS 526) – Fall 2019, Fall 2020
- Climate Change and Society: delegation to the UN COP (ENVS 426) – Fall 2019
 - Raised \$67,500 for sending students to Madrid, Spain to observe UN climate change negotiations in 2019.

Guest Lectures

- Sustainability Foundations (IDS 206) – Fall 2013, Spring 2018
- Introduction to Environmental Studies (ENVS 131) – Fall 2013
- Quantitative Methods in Environmental Sciences (ENVS 260) – Spring 2018, 2019, 2020

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- The Lifespan of Coal: From Formation to Burning (ENVS 491) – Spring 2014
- Advanced Language and Cultural Studies II (JPN 402) – Spring 2014
- Evidence Week (PACE) – Fall 2016, Fall 2017, Fall 2018
- Freshman composition (ENG180) – Fall 2016
- Introduction to Satellite Remote Sensing (EH 587) – Spring 2016, 2017, 2018
- Introduction to Environmental Health (EH501) – Fall 2017, 2018
- Planetary Health (EH) – Spring 2020
- Environmental Law (Law) – Spring 2020

Princeton University - Princeton, NJ, United States

Assistance-in-Instruction September 2007 to January 2008

- Quantitative Analysis for Public Policy (WWS303) – Prof. Graham Lord
- Nominated for the Association of Princeton Graduate Alumni Teaching Awards

Indiana University, Bloomington - Bloomington, IN, United States

Teaching Assistant January 2005 to May 2005

- Environmental Economics and Policy (V625) – Prof. Kenneth Richards

Indiana University, Bloomington - Bloomington, IN, United States

Teaching Assistant August 2004 to December 2004

- Public Management Economics (V517) & Financial Management (V361) – Prof. Rafael Reuveny

STUDENT MENTORING

Emory University Ph.D. Student Advisees:

Sam Peters (Environmental Health Sciences), main advisor, 2015 Fall – 2019 Spring

Candis Hunter (Environmental Health Sciences), committee member, 2016 Spring – 2019 Fall

Jen Stowell (Environmental Health Sciences), exam chair and committee member, 2017 Spring – 2019 Fall

Wenlu Ye (Environmental Health Sciences), main co-advisor, 2017 Fall –

Sarahna Moyd (Environmental Health Sciences), main co-advisor, 2019 Fall –

Other University Student Advisee:

Michael McClellan (MIT, Earth, Atmospheric, and Planetary Sciences, Ph.D. student), committee member, 2016 Spring – 2018 Summer

Ka Ming Fung (The Chinese University of Hong Kong, Earth and Atmospheric Sciences, Ph.D. student), academic advisor/mentor during his visit to Emory between October 2017 and March 2018

Emory University Master's Student Advisees:

Sean Goggin (ENVS, MS, 2022), 2020 Fall – current, thesis advisor

Wandave Tizhe (MPH, 2021), 2020 Spring – current, thesis advisor

Yanyu Wang (ENVS, MS, 2021), 2019 Fall – current, thesis advisor

Alicia Wun (MPH, 2020), 2019 Spring – 2020 Spring, thesis advisor

Xinyi Yao (ENVS, MS, 2020), 2018 Fall – 2020 Spring, thesis advisor

Elena Jordanov (MPH, 2020), 2018 Fall – 2020 Spring, research mentor

Antoinette Williams (MPH, 2020), 2018 Fall – 2019 Spring, research mentor

Halle Bradshaw (ENVS, BS/MS 4+1, 2019), 2017 Summer – 2019 Spring, thesis advisor

Cande Bergero Fassi (ENVS MS, 2019), 2017 Fall – 2019 Spring, thesis advisor

Wanyi Yang (MPH, 2019), 2018 Spring – 2019 Spring, thesis advisor

Chen Chen (ENVS MS, 2018), 2017 Fall – 2018 Fall, thesis advisor

Geoff Martin (ENVS MS, 2017), 2015 Fall – 2017 Spring, thesis advisor

Nicole Swartwood (MPH, 2017), 2016 Fall – 2017 Spring, thesis advisor

Futu Chen (MPH, 2016), 2015 Fall – 2016 Spring, thesis advisor

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Seongmin Nick Shim (MPH, 2016), 2015 Fall – 2016 Spring, research mentor
Steven Sclar (MPH, 2015), 2014 Fall – 2015 Spring, thesis advisor
Wenlu Ye (MDP, 2015), 2015 Spring, research mentor
Qingyang Xiao (MPH, 2015), 2013 Spring, research mentor

Emory University Undergraduate Student Advisees:

Kathryn Barr (CHEM, 2023), 2020 Fall – current, research mentor
Raven Crosby (ENVS, 2023), 2020 Fall – current, research mentor
Jack Miklaucic (ENVS, 2023), 2019 Fall – current, research mentor
Caleb Park (CHEM, 2023), 2019 Fall – current, research mentor
Jerry Tang (ENVS, 2023), 2020 Fall – current, research mentor
Sydney Warner (CHEM, 2023), 2020 Fall – current, research mentor
Michelle Bardales (ENVS, 2022), 2019 Fall – current, research mentor
Haoran Cheng (ENVS, 2022), 2018 Fall – current, research mentor
Eleanor Partington (ENVS, 2022), 2018 Fall – current, research mentor
Ruby Wiener (BIO, 2022), 2018 Fall – current, research mentor
Rebecca Luo (CS/ECON, 2021), 2019 Fall – current, research mentor
Maya Reinhart (CHEM, 2021), 2019 Fall – current, research mentor
Jack Tellerday (BIO, 2020), 2018 Fall – current, research mentor
Rachel Deininger (ENVS, 2020), 2018 Fall – current, research mentor
Samantha Distler (QTM/NBB, 2020), 2018 Fall – current, Quantitative Theory and Methods Fellow,
Honor's thesis advisor
Leah Gilbert-Odem (ENVS, 2020), 2019 Fall – 2020 Fall, research mentor
Kristina Koh (CHEM/PHYS, 2020), 2017 Fall – 2020 Fall, research mentor
Lalita Martin (ENVS, 2020), 2018 Fall – 2019 Spring, research mentor
Anna Munslow (CS, 2020), 2018 Fall – current, research mentor
Emily Rexer (Math/CS, 2020), 2018 Fall – 2019 Spring, research mentor
Momo Rutkin (CS/ENVS, 2020), 2018 Fall – current, research mentor
Georgia Spies (ENVS, 2020), 2019 Fall – current, research mentor
Laura Toledo (BIO, 2020), 2019 Spring – current, Honor's thesis advisor
Bill Wang (CS/Applied Math & Stats), 2019 Fall – current, research mentor
Yuan Yao (ENVS, 2020), 2019 Fall – current, research mentor
Jessica Yeung (BIO, 2020), 2018 Summer – 2018 Spring, research mentor (SURE)
Shufan Yu (CHEM, 2020), 2017 Fall – 2018 Spring, research mentor
Siyue Zong (ENVS, 2019), 2014 Fall – 2016 Spring, 2019 Fall – 2019 Spring, research mentor
Lauren Balotin (ENVS/Media, 2019), 2018 Fall – 2019 Spring, Honor's thesis advisor
Maya Bornstein (SOC, 2019) – Honor's thesis committee member (2019)
Katie Cush (ENVS, 2019), 2018 Spring – 2019 Spring, research mentor
Peter Marques Oliviera Soens (PHIS, 2019), 2016 Fall – 2017 Spring, research mentor (SIRE)
Nia Dubon-Robinson, (ENVS/SOC, 2019), 2016 Fall – 2017 Spring, 2018 Fall – 2019 Spring, research
mentor (SIRE)
Augustine Kang (CHEM, 2019), 2018 Spring – 2018 Fall, research mentor
Minglun Wang (CHEM, 2019), 2018 Summer – 2019 Spring, research mentor
Helena Zhang (ECON, 2019), Honor's thesis committee member (2019)
Ken Wakabayashi (ENVS/CHEM, 2018), 2017 Summer – 2018 Fall, REU research mentor
Benjamin Yosen (CHEM, 2018), 2017 Summer – 2018 Spring, REU research mentor
Elena Jordanov (CHEM, 2018) 2017 Fall – 2018 Spring, research mentor
Sarvani Kuruganti (Human Health, 2018) 2017 Fall – 2018 Spring, research mentor
Yezi Lyu (ENVS, 2018) 2017 Fall – 2018 Spring, research mentor
Aspen Ono (ENVS, 2018) 2017 Fall – 2018 Spring, Honor's thesis committee member

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Xiancong Zhang (BIO/CHEM, 2018), 2017 Fall – 2018 Spring, Honor's thesis committee member
Jennifer Fundora (ENVS, 2018), 2015 Fall – 2018 Spring, Mellon Mays mentor
Zijia Ye (CS/Math, 2018), 2014 Fall – 2015 Spring, research mentor
Abhishek Patel (BUS, 2017), 2014 Fall – 2015 Spring, research mentor (SIRE)
Raquel Soat (POL/ENVS, 2017), 2014 Fall – 2017 Spring, research mentor
Rachel Spector (BIO, 2017), 2013 Fall – 2015 Spring, research mentor (SIRE)
Boya Sun (ENVS/ECON, 2017), 2016 Spring – 2017 Spring, research mentor
Soungbin Yim (ENVS, 2017), 2014 Fall – 2017 Spring, research mentor (SRRP)
Qianru Wu (ENVS/ECON, 2017), 2015 Spring – 2017 Spring, research mentor (SURE)/Honor's thesis advisor
Caiwei Huang (POL, BA/MA, 2017), 2015 Fall – 2017 Spring, research mentor (CSLPE), Honor's thesis committee member
Virginia Marie Loeffler (ENVS, 2017), 2016 Fall – 2017 Spring, Honor's thesis committee member
Emily Li (ENVS, 2017), 2017 Spring – 2017 Spring, Honor's thesis committee member
Margarita Korobkov (ENVS, 2016), 2013 Fall – 2016 Spring, research mentor
Anika Tabasam Rastgir (ECO/BIO, 2016), 2015 Fall – 2016 Spring, research mentor
Camilla Schramek (ENVS/POL/Math, 2016), 2013 Fall – 2016 Spring, research mentor
Cindy Chu (ENVS, 2016) – Honor's thesis committee member (2016)
Elyse Lim (BIO, 2015), 2014 Fall – 2015 Spring, research mentor
Hankyul Kim (Math/ECO, 2015), 2013 Fall – 2015 Spring, research mentor (SIRE/SURE)
Jacqueline Jaryi Yap (ENVS/EAS, 2015), 2013 Fall – 2015 Spring, research mentor
Lucy Milus Anderson (ENVS/CHEM, 2013) – Honor's thesis committee member (2013)

STUDENT AWARDS

Sam Peters (Ph.D. candidate): On Recent Discoveries by Emory Researchers (ORDER), NSF Graduate Fellowship Honorable Mention, Borlaug Fellowship, RSPH Livingston Fellowship
Jennifer Fundora (Undergraduate): Mellon Mays Undergraduate Fellowship, 100 Senior Honorary
Caiwei Huang (Undergraduate): Emory Alumni Board Leadership Fellowship, Phi Beta Kappa, Schwarzman Scholarship, 100 Senior Honorary
Nia Dubon-Robinson (Undergraduate): 7th Annual GA-AHMP 2017 John Scarano Memorial Scholarship
Camilla Schramek (Undergraduate): Mickey Leland Energy Fellowship, Phi Beta Kappa, Fulbright Scholarship
Steve Sclar (MPH): Adopt-a-Scholar award
Qingyang Xiao (MPH): Third Prize on outstanding practicum award

OUTREACH ACTIVITIES

- The Mott Hall School virtual talk (June 19, 2020)
- Science Tails and Trails virtual talk (June 13, 2020)
- Punk Science Outreach, Telluride, CO (July, 2018)
- Atlanta Science Festival (2014, 2015, 2016, 2017, 2018, 2019)
- Centennial Academy (April, 2019)
- DeKalb Alternative School (April, 2018)
- Tucker Middle School (March, 2017)
- Druid Hills Environmental Club (April, 2015)
- King Middle School (March, 2015)
- Science Day at Mill Springs Academy (May, 2014)
- Discussion with Sixth Grade Cadette Girl Scouts (January, 2014)

SERVICE RESPONSIBILITIES

- ENVS Director of Graduate Studies (2019 Fall – current)
- Director of Emory Climate Talks Study Abroad Program (2018 Fall – current)

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- ENVS Faculty Search Committee (2019 Fall – 2020 Spring)
- Office of Sustainability Faculty Fellow (2018 Fall – current)
- Emory Resilience Task Force Chair (2018 Fall – current)
- Emory Climate Organization Faculty Advisor (2016 – present)
- Emory Interview Selection Committee (2016 Fall – present)
- Energy & Water Task Force Member (2016 Fall – present)
- QTM Board Member (2015 Fall – present)
- URC Interdisciplinary Grant Review Committee Member (2019 Spring)
- Anthropology/QTM Search Committee Member (2018 Fall – 2019 Spring)
- ENVS Faculty Search Committee Chair (2018 Fall – 2019 Spring)
- Marshall/Mitchell Interview Committee Members (2018 Fall)
- QTM Seminar Series Co-Chair (2018 Fall – 2019 Spring)
- Hult Prize Faculty Advisor (2018 Spring – present)
- Halle Institute Advisory Committee Member (2017 Fall)
- Schwarzman Interview Committee Member (2017 Fall)
- Emory Master of Development Practice Admission Committee Member (2017 Fall)
- Fulbright Research/Study Interview Committee Member (2016 Fall)
- Mellon Mays Undergraduate Faculty Mentor (2016 Fall – 2018 Spring)
- Climate@Emory Co-Founder
- QTM Climate Change Seminar Series co-Chair (2016 Spring)
- Multicultural Outreach and Resources at Emory (MORE) Mentor (2014, 2015)
- Sustainability Visioning Committee Member (2015 Spring)
- ENVS Faculty Search Committee Member (2013, 2014, 2017)
- ENVS Seminar Series Chair (2013 Fall, 2014 Spring), co-Chair (2015 Spring)

MEDIA COVERAGE

- “Air pollution levels will bounce back as COVID-19 restrictions loosen, scientists say.” <https://www.space.com/air-pollution-increase-covid-19-coronavirus.html>, May 12, 2020
- “Environmental Scientist Eri Saikawa Takes Lessons from Lead Contamination Crisis to Help Tackle the Next, COVID-19.” <https://www.aaas.org/membership/member-spotlight/environmental-scientist-eri-saikawa-takes-lessons-lead-contamination>, Apr. 28, 2020
- “Coronavirus Clear Skies Won’t Fix Climate Change.” <https://flagpole.com/news/news-features/2020/04/22/coronavirus-clear-skies-won-t-fix-climate-change>, Apr. 22, 2020
- “Celebrate Earth Day – even while sheltering in place.” <https://www.ajc.com/lifestyles/celebrate-earth-day-even-while-sheltering-place/Dx8FGaMmUJ7z7dUL0FG66J/>, Apr. 14, 2020
- “EPA widens lead testing area in Atlanta.” <https://www.wsbtv.com/news/local/epa-widens-lead-testing-area-atlanta/OZOOPCBGEZELZOZF5E4IG3FG24/>, Feb. 25, 2020
- “Area of potential lead contamination doubles on Atlanta’s westside.” <https://www.ajc.com/news/local-govt--politics/area-potential-lead-contamination-doubles-atlanta-westside/c19P3ZZBPg4Zkfx5kQKMPN/>, Feb. 24, 2020
- “Emory Researchers Knock On Doors Across Atlanta’s Westside To Warn About Lead Contamination.” <https://www.wabe.org/these-emory-researchers-are-knocking-on-doors-across-atlantas-westside-to-warn-about-lead-contamination/>, Feb. 19, 2020
- “Removal of unsafe lead begins in contaminated Atlanta neighborhood.” <https://www.ajc.com/news/local/removal-unsafe-lead-begins-contaminated-atlanta-neighborhood/TOimfpBRinKWcHIKMBP8CI/>, Jan. 27, 2020

- “Danger in the ground: Lead contaminates westside Atlanta neighborhood.” <https://www.ajc.com/news/local/danger-the-ground-lead-contaminates-westside-atlanta-neighborhood/r1wiLsN2tyUIIbuTI7yxEO/>, Dec. 5, 2019
- “Qatar’s Outdoor Air Conditioning Is Not the Real Climate Villain.” <https://slate.com/technology/2019/11/qatar-outdoor-air-conditioning-climate-change-emissions.html>, Nov. 4, 2019
- “Ship emissions responsible for thousands of premature deaths in China’s Pearl River Delta.” <https://blogs.agu.org/geospace/2019/08/26/ship-emissions-responsible-for-thousands-of-premature-deaths-in-chinas-pearl-river-delta/>, Aug. 26, 2019.
- “Was Volkswagen the First to Test Exhaust Fumes on Monkeys? Your Questions Answered.” National Geographic, <https://news.nationalgeographic.com/2018/02/wildlife-watch-lab-monkey-testing-volkswagen-auto-industry/>, Feb. 9, 2018.
- “Mandatory state policies work best to curb power plant emissions, study finds.” Phys.org, <https://phys.org/news/2017-11-mandatory-state-policies-curb-power.html>, Nov. 6, 2017.
- “Breaking the Feedback Loop that Fuels China’s Smog” Seeker, www.seeker.com/breaking-the-feedback-loop-that-fuels-chinas-smog-2231081192.html, Feb 1, 2017.
- “A win for air quality in Paris summit, but climate-smart agriculture still lags” The Conversation, <https://theconversation.com/a-win-for-air-quality-in-paris-summit-but-climate-smart-agriculture-still-lags-52240>, Dec. 16, 2015.
- “Yak dung burning pollutes indoor air of Tibetan households.” EurekAlert!, http://www.eurekalert.org/pub_releases/2015-01/ehs-ydb011515.php, Jan. 15, 2015.
- “Yak Dung Is Making Climate Change Worse.” Slate Magazine, http://www.slate.com/articles/technology/future_tense/2014/12/yak_dung_is_making_climate_change_worse_and_new_cookstoves_don_t_help.html, Dec. 4, 2014.
- “Burning Trash Bad for Humans and Global Warming.” Scientific American, <http://www.scientificamerican.com/article/burning-trash-bad-for-humans-and-global-warming/>, Sep. 2, 2014.
- “Professor: Multiple disciplines needed to understand climate change.” Emory Magazine, http://news.emory.edu/stories/2014/02/emag_saikawa_catalyst_for_change/campus.html, Feb. 19, 2014.
- “The growing role of farming and nitrous oxide in climate change.” Emory eScienceCommons, <http://esciencecommons.blogspot.com/2013/10/the-growing-role-of-farming-and-nitrous.html>, Oct. 9, 2013.
- “El Niño cycle has a big effect on a major greenhouse gas.” MIT News, <http://newsoffice.mit.edu/2013/el-nino-cycle-affects-nitrous-oxide-emissions-0927>, Sep. 27, 2013.

INVITED SEMINAR PRESENTATIONS

- “Tackling Global, Regional & Local Environmental Problems: Climate-Smart Agriculture, Asian Air Pollution and Heavy Metal Contamination in Atlanta,” presented at Georgia Institute of Technology, November 8, 2019
- “Atmospheric pollution and heavy metal contamination in urban ecosystems,” presented at the Workshop on International Ecological Islands, Chongming, Shanghai, October 18, 2019.
- “Tackling Global & Local Environmental Problems: Air Pollution in China, Climate-Smart Agriculture in US, China and Brazil, and Heavy Metal Soil Contamination in Atlanta” presented at Johns Hopkins University, March 12, 2019.
- “Uncertainties in emission estimates of greenhouse gases and air pollutants in China and India and their impacts on regional air quality,” presented at the Air Pollution Extremes Workshop at Columbia University, November 1-2, 2018.

- “Uncertainties in emissions inventories and their impacts on Asian air quality, human health, and the ecosystem”, a keynote speech given at the 4th Asian Air Pollution workshop in Nanjing, China, October 20-21, 2018.
- “Atmospheric and Land Modeling – improving our emissions estimates for various pollutants through modeling”, Institute of Industrial Sciences, the University of Tokyo, August 6, 2018.
- “Measuring N₂O, CO₂, and NH₃ emissions from corn fields in the US, China, and Brazil”, Telluride Science Research Center New Insights into Gas Phase Atmospheric Chemistry workshop, July 23-27, 2018.
- “A Tale of Three Stories: Air Pollution, Climate Change, and Sustainable Development,” presented at Yonsei University, March 14, 2018.
- “Air Pollution, Climate Change and the Ecosystem” Presented at the 4th annual Leadership And Multifaith Program (LAMP) symposium, February 17, 2018.
- “What does climate change mean to us and what can we do about it?” Presented as a part of the Lifelong Learning Webinar series for the Emory Alumni Association on October 25, 2017.
- “Global and regional emissions estimates for N₂O – from bottom-up and top-down.” Presented as a part of the webinar series for the International Centre for Tropical Agriculture (CIAT), CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and Latin American Greenhouse Gas Mitigation Network (LAMNET) on October 13, 2017.
- “Communicating health impacts of air pollution.” Presented at the Environmental Sciences seminar, Emory University, September 11, 2017
- “Air Pollutant Emissions and Their Impacts on Air Quality, Health, and Climate in China.” Presented at American University, January 30, 2017.
- “Anthropogenic Emissions and Their Impacts on Air Quality, Health, and Climate in China.” Presented at Washington State University, January 27, 2017.
- “Estimating soil nitrous oxide emissions through modeling and measurements.” Presented at the Department of Geophysics at Georgia State University, September 8, 2016.
- “China’s air pollutant and CO₂ emissions – Uncertainty and Impacts.” Presented at the China Colloquium at Emory University, October 5, 2015.
- “Indoor Air Quality in Tibet and Emissions Estimates in Asia.” Presented at Georgia Institute of Technology Earth Sciences Seminar, Jan. 22, 2015.
- “China’s Environmental Challenges – air pollution and climate change.” Presented at the China Colloquium at Emory University, Nov. 21, 2014.
- “Win-Win-Win: Benefits of regulating vehicle emissions on air quality, human health, and the economy.” Presented at the National University of Singapore, June 19, 2014.
- “Global and regional emissions estimates for N₂O – from bottom-up and top-down.” Presented at the College of Urban and Environmental Sciences, Peking University, Beijing, China, May 28, 2014.
- “Regional N₂O emissions: Estimations through Process and Inverse Modeling.” Presented at the 3rd Asian APN workshop on Asian Greenhouse Gases Budget in Yokohama, April 9, 2014.
- “Global and Regional Emissions Estimates for N₂O – from bottom-up and top-down.” Presented at the Center for Earth System Science, Tsinghua University, Beijing, China, Nov. 19, 2013.
- “Win-Win-Win: Benefits of regulating vehicle emissions on air quality, human health, and the economy.” Presented at the School of Public Policy, Georgia Institute of Technology, Oct. 10, 2013.
- “Policy Diffusion of Emission Standards: Is there a Race to the Top?” Presented at Political Science Colloquium, Emory University, Atlanta, Apr. 4, 2013.
- “Win-Win-Win: Benefits of regulating vehicle emissions on air quality, human health, and the economy.” Presented at the Center for Marine and Atmospheric Sciences, Hamburg, Germany, Jun. 14, 2012.

- “Benefits of regulating air pollution on air quality and health.” Presented at the International Centre for Integrated Mountain Development (ICIMOD) inception meeting for black carbon and other short-lived climate forcers, Kathmandu, Nepal, Apr. 2, 2012.
- “Policy diffusion of automobile emission standards: Is there a race to the top?” Presented at the International Centre for Integrated Mountain Development (ICIMOD) inception meeting for black carbon and other short-lived climate forcers, Kathmandu, Nepal, Apr. 2, 2012.
- “Process modeling of global soil nitrous oxide emissions – past, present, and future.” Presented at the Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA, Mar. 6, 2012.
- “Win-Win-Win: Positive impacts of regulating vehicle emissions on air quality, human health, and the economy (in Japanese).” Presented at the Department of Chemistry and Biotechnology, the University of Tokyo, Tokyo, Japan, Jan. 10, 2012
- “Understanding global HCFC-22 and N₂O emissions.” Presented at the Japan Agency for Marine-Earth Science and Technology, Yokohama, Japan, Jan. 6, 2012.
- “Sustainable Air Quality Regulation?” Keynote speech given at the Sustainability Symposium Series at the National Cheng Kung University, Tainan, Taiwan, Dec. 23, 2011.
- “Win-Win-Win: Benefits of regulating vehicle emissions on air quality, human health, and the economy.” Presented at the Department of Environmental Engineering, the National Cheng Kung University, Tainan, Taiwan, Dec. 22, 2011.
- “Win-Win-Win: Positive impacts of regulating vehicle emissions on air quality, human health, and the economy.” Presented at the Department of Environmental Studies, Emory University, GA, Dec. 5, 2011.
- “Scenario Analyses of China’s Vehicle Emissions on Regional Air Quality in 2000 and 2020.” Presented at the Harvard China Project Seminar, Harvard University, MA, Nov. 4, 2010.
- “Impacts of present and potential future emissions from China on air quality, premature mortality and radiative forcing.” Presented at the Institute on the Environment, University of Minnesota, Twin Cities, MI, Jun. 18, 2010.
- “Impacts of present and potential future emissions from China on air quality, premature mortality and radiative forcing.” Presented at the Earth, Atmospheric, and Planetary Sciences Department, Massachusetts Institute of Technology, Cambridge, MA, Apr. 28, 2010.
- “Impacts of present and potential future emissions from China on air quality, premature mortality and radiative forcing.” Presented at the NASA Goddard Institute for Space Studies, New York, NY, Feb. 5, 2010.
- “The Policy Diffusion of Automobile Emissions Standards: Is there a Race to the Top?” Presented at the School of Public and Environmental Affairs, Indiana University, Bloomington, Dec. 7, 2009.
- “The Policy Diffusion of Automobile Emissions Standards: Is there a Race to the Top?” Presented at the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, Oct. 27, 2009.
- “The Impact Analysis of Aerosols from China on Global Air Quality, Premature Deaths and Radiative Forcing – Year 2000 and 2020 – (in Japanese).” Presented at the National Institute of Environmental Studies, Tsukuba, Japan, Aug. 20, 2009.
- “The Impact of Air Pollution from China on Air Quality, Premature Mortality and Radiative Forcing (in Japanese).” Presented at the Japan Agency for Marine Science and Technology, Kanagawa, Japan, Aug. 12, 2009.
- “The Impact of Aerosols from China on Global Air Quality, Premature Deaths and Radiative Forcing: The Dilemma between Air Quality and Global Warming.” Presented at the Princeton Energy Group Lunch Meeting, Princeton Environmental Institute, Princeton University, NJ, Oct. 3, 2008.
- “A Tool for Urban Air Pollution Analysis.” Presented at the World Bank, Washington, DC, Aug. 11, 2004.
- “Are We Ready for the Future? Visions and Voices for the Next Generation.” Main Plenary Panel at the 2002 Annual Meeting of the *Alliance for Global Sustainability*, San Jose, Costa Rica, Mar. 20-24, 2002.

CONFERENCE PRESENTATIONS (Atmospheric Science)

- “Garbage burning in South Asia – how important is it to air quality?” Paper to be presented at the American Geophysical Union Fall Meeting (invited talk), December, 2020
- “Impacts of different types of emissions on air quality and health”, Workshop on Air Pollution, Climate Change and Human Health, Nanjing University, Nanjing, China, July 16-18, 2019.
- Invited to present at the Air Pollution Extremes Workshop, Columbia University, NY, November 1-2, 2018.
- “Uncertainties in emission estimates of greenhouse gases and air pollutants in China and India and their impacts on regional air quality.” Paper presented at the American Geophysical Union Fall Meeting 2017, New Orleans, LA, December 11-15, 2017.
- “Comparison of Asian Emissions Inventories (invited talk).” Paper presented at the US EPA Emissions Inventory Conference, April 12-16, 2015.
- “Comparison of Emissions Inventories of Anthropogenic Air Pollutants in Asia (invited talk).” Paper presented at the American Geophysical Union Fall Meeting, Dec. 15-19, 2014.
- “Indoor Air Pollution due to Yak Dung Combustion in Nam Co, Tibet.” Paper presented at the International Workshop on Air Quality in Asia, Hanoi, Vietnam, June 24-26, 2014.
- “Indoor Air Pollution due to Yak Dung Combustion in Nam Co, Tibet.” Poster presented at the GEIA Annual Meeting, Boulder, CO, June 10-11, 2014.
- “Comparison of emissions inventories of anthropogenic air pollutants in Asia with a special focus on China’s transport sector.” Paper presented at the GEIA Annual Meeting, Boulder, CO, June 10-11, 2014.
- “Indoor Air Pollution due to Yak Dung Combustion in Nam Co, Tibet.” Presented at the 16th Conference on Atmospheric Chemistry, Atlanta, GA, Feb. 2-6, 2014.
- “Global and Regional Emissions Estimates for N₂O.” Presented at the American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 9-13, 2013.
- “Estimating impacts of Chinese transport emissions on Asian air quality and health.” Presented at the Urban Environmental Pollution Conference, Beijing, China, Nov. 18-20, 2013.
- “Indoor air quality in Tibet - survey and measurements.” Presented at Gordon Conference on Atmospheric Chemistry, West Dover, VT, Jul. 28-August 2, 2013.
- “Global and regional emissions estimates for N₂O” Paper presented at the International Workshop on Inventory, Modeling and Climate Impacts of Greenhouse emissions (GHG’s) and Aerosols in the Asian Region, Jun. 26-28, 2013.
- “China’s vehicle emissions – new emissions inventories and their impacts on regional air quality.” Presented at the Workshop on Atmospheric Composition and the Asian summer Monsoon (ACAM), Kathmandu, Nepal, Jun. 9-12, 2013.
- “Possible ENSO Influence on Soil N₂O Emissions and Atmospheric N₂O Mole Fractions,” Presented at the American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 3–7, 2012.
- “Estimating global soil N₂O emissions using DNDC in CLMCN.” Presented at the CESM workshop, Breckenridge, CO, Jun. 20, 2012.
- “Process modeling of global soil nitrous oxide emissions.” Paper presented at the 2012 ACCENT-IGAC-GEIA conference, Toulouse, France, Jun. 13, 2012.
- “Global and Regional Emissions Estimates for HCFC-22.” Poster presented at the 2012 ACCENT-IGAC-GEIA conference, Toulouse, France, Jun. 12, 2012.
- “Global Soil Nitrous Oxide Emissions in a Future Climate.” Paper presented at the First Conference on Atmospheric Biogeosciences, Boston, MA, May 31, 2012.
- “Global and Regional Emissions Estimates for HCFC-22.” Paper presented at the 40th NOAA ESRL Global Monitoring Annual Conference 2012, Boulder, CO, May 17, 2012.
- “Process modeling of global soil nitrous oxide emissions – with a focus on natural soil.” Presented at the 2011 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 5-9, 2011.

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- “Soil N₂O emissions – past, present and future.” Poster presented at the World Climate Research Programme, Denver, CO, Oct. 24-28, 2011.
- “The impact of China’s vehicle emissions on regional air quality in 2000 and 2020: a scenario analysis.” Poster presented at the Gordon Conference on Atmospheric Chemistry, Mount Snow, VT, Jul. 24-29, 2011.
- “Present and Potential Future Contributions of Sulfate, Black and Organic Carbon Aerosols from China to Global Air Quality, Premature Mortality and Radiative Forcing.” Paper presented at the American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 15-19, 2008
- “Present and Potential Future Contributions of Sulfate, Black and Organic Carbon Aerosols from China to Global Air Quality, Premature Mortality and Radiative Forcing.” Paper presented at the Better Air Quality Conference, Bangkok, Thailand, Nov. 12-14, 2008.
- “Present and Potential Future Contributions of Sulfate, Black and Organic Carbon Aerosols from China to Global Air Quality, Premature Mortality and Radiative Forcing.” Poster presented at the Hemispheric Transport of Air Pollution Workshop, Washington D.C., Jun. 9-13, 2008.
- “Present and Potential Future Contributions of Sulfate, Black and Organic Carbon Aerosols from China to Global Air Quality, Premature Mortality and Radiative Forcing.” Poster presented at the 4th International Geosphere Biosphere Program Congress, Cape Town, South Africa, May 5-9, 2008.

CONFERENCE PRESENTATIONS (Political Science/Policy)

- UNFCCC COP23 side event “Role of Universities in Implementing Article 11 of the Paris Agreement.” Panelist, Bonn, Germany, November 16, 2017.
- UNFCCC COP23 side event “Paris Agreement-style capacity building: Balancing international standards & national context” Panelist, Bonn, Germany, November 6, 2017.
- 9th Annual Young Leaders Conference “Agricultural Solutions for Tomorrow: A look into Biotech, Agribusiness & Climate Smart Agriculture.” Moderator, Climate Smart Agriculture, Atlanta, GA, February 25, 2017.
- Chindia Summit 2016 “Footprint of India and China on the rest of the world.” Panelist, Climate Change in Chindia, Atlanta, GA, March 9, 2016
- “China’s War on Air Pollution.” Paper presented at China: Tradition and Transformation, a joint conference of Agnes Scott College and Emory University, Atlanta, GA, Oct. 30 – Nov. 1, 2014.
- “Effect of Fragmented Bureaucracy on Air Quality Management in the Road Transport Sector in China.” Paper presented at the Association for Asian Studies Annual Meeting, Philadelphia, PA, Mar. 25-28, 2010.
- “The Policy Diffusion of Automobile Emissions Standards: Is there a Race to the Top?” Paper presented at the International Studies Association Annual Convention, New Orleans, LA, Feb. 17-20, 2010.
- “The Policy Diffusion Mechanism of Automobile Emissions Standards and Its Impact on Automobile Exports.” Paper presented at the Association for Environmental Studies and Sciences Annual Meeting, Madison, Wisconsin, Oct. 8-11, 2009.
- “Environmental Cooperation in East Asia.” Paper presented at the Graduate Climate Conference, Seattle, WA, Apr. 8-9, 2006.
- “Interactive Models for Urban Air Quality Management.” with Nagaraja Rao Harshadeep et al. Poster presented at the Better Air Quality 2004, Agra, India, Dec. 6-8, 2004.

PROFESSIONAL SOCIETY MEMBERSHIPS

American Geophysical Union; European Geophysical Union; Earth Science Women’s Network

PROFESSIONAL ACTIVITIES

Reviewer for academic journals, including:

- Nature Food

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- Atmospheric Chemistry and Physics
- Journal of Geophysical Research – Atmospheres
- Journal of Geophysical Research – Biogeosciences
- Geophysical Research Letters
- Environmental Science and Technology
- Environmental Science and Technology Letters
- Journal of Air & Waste Management Association
- Biogeosciences
- Atmospheric Environment
- International Journal of Environmental Research and Public Health
- American Political Science Review
- World Politics
- Energy Policy
- Environment International
- Science of the Total Environment
- Chemosphere
- GeoHealth
- Global Environmental Change
- Resources, Conservation & Recycling
- Journal of Environmental Policy and Planning
- Technological and Economic Development of Economy
- Plant and Soil
- European Journal of Soil Science
- Environmental Pollution
- Environmental Management

Reviewer for proposals for the following agencies:

- National Aeronautics and Space Administration (NASA)
- National Oceanic and Atmospheric Administration (NOAA)
- National Science Foundation (NSF)
- United States Department of Agriculture (USDA)
- Netherlands Organisation for Scientific Research (NWO)
- Marion Milligan Mason Award for Women in the Chemical Sciences
- Austrian Partnership Programme in Higher Education and Research for Development
- The Marsden Fund
- CRDF Global
- Oxford University Press
- Cambridge University Press

Reviewer for the following workshops:

- DISsertation Initiative for the advance of Climate Change ReSearch (DISCCRS)
- New Generation of Polar Researchers Symposium

Steering Committee Member:

- Chinese Ecosystem Research Network (CERN) – National Ecological Observatory Network (NEON) Summit (January 2014 – present)

Coordinating Lead Author:

- Hindu Kush Himalayan Monitoring and Assessment Programme (HIMAP) Air Pollution chapter (May 2016 – present)

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Conference Session Chair Person:

- Convener: Closing the global nitrous oxide budget: magnitude, spatiotemporal patterns and responses, Fall American Geophysical Union Meeting, December 2015

SKILLS

- Statistics: STATA, SAS
- Atmospheric Modeling: MOZART-2, MOZART-4, WRF, WRF-Chem, RAINS-Asia
- Biogeochemical Modeling: CLM-CN
- Earth System Modeling: CESM
- Programming Languages: Fortran, NCL, IDL, Visual Basic, Java
- Mathematical Modeling: GAMS

LANGUAGES

Japanese (native), English (fluent), Mandarin (advanced), Korean (intermediate), French (intermediate)