

Yuxuan Wang

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Phone: (713) 743-9049; Email: ywang246@central.uh.edu;Research Website: <http://easd.geosc.uh.edu/ywang>Google Scholar Profile: <http://scholar.google.com/citations?user=ISU-6fkAAAAJ&hl=en&oi=ao>ResearcherID Profile: <http://www.researcherid.com/rid/C-6902-2014>**Education**2005 Ph.D. Earth and Planetary Sciences, *Harvard University*2000 B.E. Environmental Engineering, *Tsinghua University* (Beijing, China)2000 B.E. (minor) Computer Technology and Application, *Tsinghua University***Professional Appointments**2020 – present Associate Professor, Dept. of Earth and Atmospheric Sciences, *Univ. of Houston*2016 – 2020 Assistant Professor, Dept. of Earth and Atmospheric Sciences, *Univ. of Houston*2014 – 2016 Assistant Professor (joint appoint), Dept. of Atmospheric Sciences, *Texas A&M Univ.*2013 – 2016 Assistant Professor, Dept. of Marine Sciences, *Texas A&M Univ. Galveston Campus*2014 – 2018 Adjunct Associate Professor, Dept. of Earth System Sciences, *Tsinghua Univ.*2011 – 2013 Associate Professor, Center for Earth System Science, *Tsinghua Univ.*2008 – 2011 Associate Professor, School of Environment, *Tsinghua Univ.*2008 Lecturer on Environmental Science and Public Policy, *Harvard Univ.*2007-2008 Research Associate, School of Engineering and Applied Sciences, *Harvard Univ.*2005-2007 Postdoctoral Fellow, School of Engineering and Applied Sciences, *Harvard Univ.***Research Areas**

Air pollution and air quality

Modeling of atmospheric chemistry, transport, and emissions

Interactions between atmospheric chemistry and climate

Prediction and forecast of extreme pollution events

Research Awards and Honors

- Highly Cited Paper (*Wang Y et al., 2013*), Web of Science, Thomson Reuters, 2018-2019
- Recipient of China National Outstanding Youth Talent Support, 2013
- Tsinghua-Inspur Award for Outstanding Youth Talent in Computational Geoscience, 2012
- Selected in the Beijing Nova Program, Beijing Municipal Science and Technology Commission, 2012
- Talent of the New Century Award, Ministry of Education, China, 2011
- China's State Science and Technology Progress Award, Class 2, 2010
- Invited participant in Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS), Brookhaven National Laboratory, Department of Energy, 2005

Teaching Awards and Honors

Atmospheric Chemistry course named top 5% graduate-level course by student evaluation, Tsinghua University, Fall 2012
Certificate for Distinction in Teaching, Harvard University, 2005

Student Awards and Honors

Ph.D. student Tabitha Lee awarded NASA FINESST Fellowship, 2021
Ph.D. student Claudia Bernier awarded NASA MUREP Fellowship, 2019
Ph.D. student Claudia Bernier selected for the NCAR/ACOM Ralph C. Cicerone Fellowship, 2019
Ph.D. student Elizabeth Klovenski awarded NASA MUREP Fellowship, 2018
Ph.D. student Claudia Bernier selected for the NCEP Student Internship Program, 2018
Ph.D. student Sing-Chun Wang won 2nd Place for Oral Presentation at EAS Department Research Day, 2018

Leadership Positions in Professional Organizations

GEOS-Chem Model Steering Committee member and Nested Model Scientist, 2009 – present
Global Emissions Initiative (GEIA) Scientific Steering Committee member, 2012 – present
NASA Atmospheric Science Data Center (ASDC) Distributed Active Archive Center (DAAC) User Working Group member, 2018 – present

Research Grants Funded (US sources; 2014 - present)

External Research Grants

1. Analysis of 2021 Offshore Monitoring, *Texas Commission on Environmental Quality* (TCEQ), PI: **Yuxuan Wang**; Co-PI: James Flynn, Paul Walter; 2022, \$140,000 (\$120,000 to YW)
2. TRACER-AQ Analysis in Houston, *Texas Commission on Environmental Quality* (TCEQ), PI: James Flynn (UH); Co-PI: **Yuxuan Wang**, Rebecca Sheesley (Baylor), Sascha Usenko (Baylor), Paul Walter (Saint Edward's), Mark Estes (Saint Edward's); 2022-2023; \$225,000 (\$30,000 to YW)
3. Identifying unreported NO₂ hotspots from satellite data and quantifying their effects, NASA FINESST, PI: Yuxuan Wang (sole PI); 2021-2024; \$112,500
4. Global Modeling of Future Emissions, 2021, *Texas Commission on Environmental Quality (TCEQ)*, PI: **Yuxuan Wang** (sole PI); \$20,000
5. TRACER-MAP: Mapping Aerosol Processes across Houston during convective cell events; *Department of Energy*; PI: Rebecca Sheesley; Co-PI: James Flynn, **Yuxuan Wang**, Sascha Usenko, Robert Griffin, Don Collins; 2020 – 2024; \$891,761 (\$133,459 to YW)
6. Galveston Offshore Ozone Observations (GO3), *Texas Air Quality Research Program* (AQRP); PI: James Flynn; Co-PI: **Yuxuan Wang**, Paul Walter; 2020 – 2021; \$201,754 (\$100,000 to YW)
7. Characterization of Corpus Christi and San Antonio Air Quality During the 2020 Ozone Season; *Texas Air Quality Research Program* (AQRP); PI: Robert Griffin; Co-PI: James Flynn, **Yuxuan Wang**, Rebecca Sheesley, Sascha Usenko; 2020 – 2021; \$288,727 (\$57,834 to YW)

8. Quantifying Spatiotemporal Variations of Surface Ozone Trends in the Houston-Galveston-Brazoria Area and Identifying the Drivers; 2020-2021; *Texas Air Research Center/Lamar University*; PI: **Yuxuan Wang** (sole PI); \$13,962
9. Black and Brown Carbon (BC)₂ Monitoring in Houston and El Paso in 2020; *Texas Commission on Environmental Quality*; PI: James Flynn (UH); Co-PI: **Yuxuan Wang**, Rebecca Sheesley (Baylor), Sascha Usenko (Baylor); 2020-2021; \$808,295
10. Ozonesonde Launches in San Antonio and El Paso; *Texas Commission on Environmental Quality*; PI: James Flynn (UH); Co-PI: **Yuxuan Wang**, Paul Walker (St. Edwards); 2019-2021; \$210,000
11. Impact of Global Model Configurations on Boundary Conditions; 2019-2020; *Texas Commission on Environmental Quality (TCEQ)*, PI: **Yuxuan Wang** (sole PI); \$75,000
12. A holistic and long-term analysis of atmospheric composition changes during droughts in the continental U.S.; 2019 – 2022; *NOAA Atmospheric Chemistry Carbon Cycle and Climate (AC4) Program*; PI: **Yuxuan Wang**; Co-PI: Jun Wang (U Iowa), \$363,057 (\$205,468 to YW)
13. Synthesis Analysis of Multi-Dimensional Ozone Measurements in Coastal Environments Toward Improving Ozone Simulation and Advancing Geostationary Satellite Products; 9/1/2019 - 8/31/2022; *NASA Advanced STEM Training and Research Fellowship* to Claudia Bernier; PI: **Yuxuan Wang** (sole PI); \$165,000
14. Investigating the effects of drought stress on biogenic VOC emissions and tropospheric air quality; 2019 – 2022; *NASA Atmospheric Composition Modeling and Analysis Program (ACMAP)*; PI: **Yuxuan Wang**; Co-PI: Alex Guenther (UCI), Saewung Kim (UCI); \$586,102
15. Synthesis analysis of mesoscale and synoptic-scale circulation patterns on ozone transport and formation in Houston and San Antonio; 2019-2020; *Texas Commission on Environmental Quality (TCEQ)*, PI: **Yuxuan Wang**; Co-PI: James Flynn (UH); \$165,217
16. Simulating the effects of hydroclimate stress on BVOC-chemistry-climate interactions in GISS ModelE; 2018-2021; *NASA Advanced STEM Training and Research (ASTAR) Fellowship* to Elizabeth Klovenski; PI: **Yuxuan Wang** (sole PI); \$165,000
17. Drought-induced wildfires in Texas: statistical patterns and effects on ozone; 2018-2019; *Texas Air Research Center/Lamar University*; PI: **Yuxuan Wang** (sole PI); \$25,000
18. Analysis of San Antonio Field Study 2017 Monitoring Data; 2018-2019; *Texas Commission on Environmental Quality*; PI: James Flynn (UH); Co-PI: **Yuxuan Wang**, Robert Griffin (Rice), Rebecca Sheesley (Baylor), Sascha Usenko (Baylor), Gary Morris (St. Edwards); \$150,000
19. Collaborative Research: Improving our understanding of Chinese haze events by quantifying the formation of sulfate and nitrate aerosol in Beijing; 2017-2020; *National Science Foundation*; PI: Becky Alexander (UW); Co-PI: **Yuxuan Wang**; \$57,126 to YW
20. High Background Ozone Events in the Houston-Galveston-Brazoria Area: Causes, Effects, and Case Studies of Central American Fires; 2016-2017; *Texas Air Quality Research Program (AQR)*; PI: **Yuxuan Wang**, Co-PI: Robert Talbot (UH); \$191,367
21. Variability and Trend of Background Ozone over the Houston-Galveston-Brazoria region: contributions from out-of-state emissions and large-scale circulation; 2016; *Texas Commission on Environmental Quality (TCEQ)*; PI: **Yuxuan Wang** (sole PI); \$150,000

22. Impact of large-scale circulation patterns on surface ozone concentrations in Houston-Galveston-Brazoria; 2015; *Texas Air Quality Research Program (AQRP)*; PI: **Yuxuan Wang** (sole PI); \$79,325

Internal Research Grants

1. Predictive Tools for Large Precipitating Storms in Coastal Texas and Louisiana, 2018-2019; **Hurricane Resilience Research Institute (HuRRI)**, PI: Robert Talbot (UH), Co-PI: **Yuxuan Wang**; \$25,000
2. Feedback effects of aerosols on the drought-flood cycle in the Community Earth System Model; 2018-2019; **University of Houston Center for Advanced Computing and Data Science (CACDS)**; PI: **Yuxuan Wang** (sole PI); \$24,000
3. Multidisciplinary Mobile Imaging System; 2018-2020; **University of Houston/DOR**; PI: Shuhab Khan (UH); Co-PI: Robert Talbot (UH), **Yuxuan Wang**; \$50,000

Research Grants Funded in China (prior to 2013)

1. National Outstanding Youth Talent Support Fund; 2011-2013; *Ministry of Education, China*; PI: **Yuxuan Wang** (sole PI); \$390,000
2. Coupled modeling of the interaction between global carbon cycle and climate; 2011-2013; *Ministry of Science and Technology in China*; PI: **Yuxuan Wang**; Co-PI: Li Liu, Shiming Xu, Fanghua Xu, Wenyu Huang; \$680,000 (50% to YW)
3. Trend of inorganic aerosols and precursors in China; 2009-2013; *Chinese Academy of Sciences*, PI: **Yuxuan Wang**; Co-PI: Jiming Hao, Shuxiao Wang, Jingkun Jiang; \$465,000 (50% to YW)
4. Current characteristics and future changes of background ozone over China; 2011-2013; *National Science Foundation of China*; PI: **Yuxuan Wang** (sole PI); \$30,000
5. Study on emissions, concentrations, transport, and climate impact of black carbon in Northeast Asia; 2010-2012; *Ministry of Science and Technology in China*; PI: Jiming Hao; Co-PI: **Yuxuan Wang**; \$187,000 (40% to YW)
6. Effects of changing land cover on regional air quality; 2010-2012; *Ministry of Science and Technology in China*; PI: **Yuxuan Wang** (sole PI); \$78,000
7. Reconciling control of carbon and air pollution with economic growth in China; 2009-2010; *Energy Foundation of China*; PI: Michael B. McElroy and Dale W. Jorgenson; Co-PI: **Yuxuan Wang**, Jing Cao, Yu Zhao; \$400,000 (\$50,000 to YW)

Peer-Reviewed Journal Articles

(Underline indicates student supervised, *indicates me as corresponding author)

1. Li, W., **Y. Wang***, Flynn, J., Griffin, R. J., Guo, F., & Schnell, J. L. Spatial variation of surface O₃ responses to drought over the contiguous United States during summertime: role of precursor emissions and ozone chemistry. *Journal of Geophysical Research: Atmospheres*, e2021JD035607, <https://doi.org/10.1029/2021JD035607>, 2022
2. Jia, B., **Y. Wang***, Wang, C., Zhang, Q., Gao, M. and Yung, K.K.L.. Sensitivity of PM_{2.5} to NO_x emissions and meteorology in North China based on observations. *Science of The Total Environment*, 766, p.142275, 2021
3. Naimark, J. G., Fiore, A. M., Jin, X., **Wang, Y.**, Klovenski, E., & Braneon, C.. Evaluating drought responses of surface ozone precursor proxies: Variations with land cover type, precipitation, and temperature. *Geophysical Research Letters*, 48, e2020GL091520. <https://doi.org/10.1029/2020GL091520>, 2021

4. Li, W., **Y. Wang***, Bernier, C., & Estes, M.: Identification of sea breeze recirculation and its effects on ozone in Houston, TX, during DISCOVER-AQ 2013. *Journal of Geophysical Research: Atmospheres*, 125, <https://doi.org/10.1029/2020JD033165>, 2020
5. Wang, S. S.-C. and ***Wang, Y.**: Quantifying the effects of environmental factors on wildfire burned area in the south central US using integrated machine learning techniques, *Atmos. Chem. Phys.*, 20, 11065–11087, <https://doi.org/10.5194/acp-20-11065-2020>, 2020
6. Zhang, L., Lin, M., Langford, A. O., Horowitz, L. W., Senff, C. J., Klovenski, E., **Wang, Y.**, Alvarez II, R. J., Petropavlovskikh, I., Cullis, P., Sterling, C. W., Peischl, J., Ryerson, T. B., Brown, S. S., Decker, Z. C. J., Kirgis, G., and Conley, S.: Characterizing sources of high surface ozone events in the southwestern US with intensive field measurements and two global models, *Atmos. Chem. Phys.*, 20, 10379–10400, <https://doi.org/10.5194/acp-20-10379-2020>, 2020
7. Tang, Y., D. Q. Tong, K. Yang, P. Lee, B. Baker, A. Crawford, W. Luke, A. Stein, P. C. Campbell, A. Ring, J. Flynn, **Y. Wang**, J. McQueen, L. Pan, J. Huang, I. Stajner: Air quality impacts of the 2018 Mt. Kilauea Volcano eruption in Hawaii: A regional chemical transport model study with satellite-constrained emissions, *Atmospheric Environment*, 117648, <https://doi.org/10.1016/j.atmosenv.2020.117648>, 2020
8. Fan, M.-Y., Zhang, Y.-L., Lin, Y.-C., Cao, F., Zhao, Z.-Y., Sun, Y., Y. Qiu, P. Fu, **Y. Wang**: Changes of emission sources to nitrate aerosols in Beijing after the clean air actions: Evidence from dual isotope compositions. *Journal of Geophysical Research: Atmospheres*, 125, e2019JD031998, <https://doi.org/10.1029/2019JD031998>, 2020
9. Dayalu, A., Munger, J. W., **Wang, Y.**, Wofsy, S. C., Zhao, Y., Nehr Korn, T., Nielsen, C., McElroy, M. B., and Chang, R.: Evaluating China's anthropogenic CO₂ emissions inventories: a northern China case study using continuous surface observations from 2005 to 2009, *Atmos. Chem. Phys.*, 20, 3569–3588, <https://doi.org/10.5194/acp-20-3569-2020>, 2020
10. Bernier, C., **Y. Wang***, M. Estes, R. Lei, B. Jia, S. Wang, and J. Sun: Clustering surface ozone diurnal cycles to understand the impact of circulation patterns in Houston, TX, *Journal of Geophysical Research: Atmospheres*, 124, 13457–13474, <https://doi.org/10.1029/2019JD031725>, 2019
11. Lin, N., **Y. Wang***, Y. Zhang, K. Yang, A large decline of tropospheric NO₂ in China observed from space by SNPP OMPS, *Sci Total Environ*, 675, 337-342, 2019
12. Xie, Y., **Y. Wang***, W. Dong, J.S. Wright, L. Shen, Z. Zhao, Evaluating the response of sulfate to hydroclimate variations in the GEOS-Chem model: role of meteorological inputs, *J. Geophys. Res.*, 124, 1662-1679, 2019
13. Xie, Y., **Y. Wang***, M. Bilal, W. Dong, Mapping daily PM_{2.5} at 500 m resolution over Beijing with improved hazy day performance, *Sci Total Environ*, 659, 410-418, 2019
14. Zhao, Z., **Y. Wang***, M. Qin, Y. Hu, Y. Xie, A.G. Russell, Drought Impacts on Secondary Organic Aerosol: a case study in the Southeast United States, *Environ. Sci. Technol.*, 53(1), 242-250, 2019
15. Shao, J., Q. Chen, **Y. Wang**, X. Lu, P. He, Y. Sun, V. Shah, R.V. Martin, S. Philip, S. Song, Y. Zhao, Z.Q. Xie, L. Zhang, and B. Alexander, Heterogeneous sulfate aerosol formation mechanisms during wintertime Chinese Haze events: Air quality model

- assessment using observations of sulfate oxygen isotopes in Beijing, *Atmos. Chem. Phys.*, 19, 6107-6123, doi: 10.5194/acp-19-2107-2019, 2019
16. Lei, R., R. Talbot, **Y. Wang**, S. Wang, M. Estes, Surface MDA8 ozone variability during cold front events over the contiguous United States during 2003–2017, *Atmos. Environ.*, 213, 359-366, 2019
 17. Ge, W., Y. Yin, J. S. Wright, W. Huang, B. Jia, **Y. Wang**, Z. Yang, Links between the large-scale circulation and daily air quality over central–eastern China during winter, *J. Geophys. Res.*, 124, <https://doi.org/10.1029/2018JD030154>, 2019
 18. Liu, S., C. Zhu, H. Tian, **Y. Wang**, K. Zhang, B. Wu, X. Liu, Y. Hao, X. Bai, S. Lin, Y. Wu, P. Shao, and H. Liu, Spatiotemporal Variations of Ambient Concentrations of Trace Elements in a Highly Polluted Region of China, *J. Geophys. Res.*, 123, <https://doi.org/10.1029/2018JD029562>, 2019
 19. Song S., M. Gao, W. Xu, Y. Sun, D. Worsnop, J. Jayne, Y. Zhang, L. Zhu, M. Li, Z. Zhou, C. Cheng, Y. Lv, Y. Wang, W. Peng, X. Xu, N. Lin, **Y. Wang**, S. Wang, J. W. Munger, D. Jacob, and M. B. McElroy, Possible heterogeneous hydroxymethanesulfonate (HMS) chemistry in northern China winter haze and implications for rapid sulfate formation, *Atmos. Chem. Phys.*, 19, 1357-1371, 2019
 20. Wang, S.-C., **Y. Wang***, M. Estes, R. Lei, R. Talbot, L. Zhu, and P. Hou, Transport of Central American Fire Emissions to the U.S. Gulf Coast: Climatological pathways and impacts on ozone and PM_{2.5}, *J. Geophys. Res.*, 123, 8344–8361, 2018
 21. Jia, B., **Y. Wang***, S. Huang, Y. Nan, X. Zhou, Variations of Siberian High Position under climate change: impacts on winter pollution over North China, *Atmos. Environ.*, 189, 227–234, 2018
 22. Nan, Y. and ***Wang, Y.**, De-coupling interannual variations of vertical dust extinction over the Taklimakan Desert during 2007–2016 using CALIOP, *Sci Total Environ*, 633, 608–617, 2018
 23. Nan, Y. and ***Wang, Y.**, Observational evidence for direct uptake of ozone in China by Asian dust in springtime, *Atmos. Environ*, 186, 45-55, 2018
 24. Shen, L., Jacob, D. J., Mickley, L. J., **Wang, Y.**, and Zhang, Q.: Insignificant effect of climate change on winter haze pollution in Beijing, *Atmos. Chem. Phys.*, 18, 17489-17496, <https://doi.org/10.5194/acp-18-17489-2018>, 2018
 25. Lei, R., R. Talbot, **Y. Wang**, S. Wang, M. Estes, Influence of cold fronts on variability of daily surface O₃ over the Houston-Galveston-Brazoria Area in Texas USA during 2003–2016, *Atmosphere*, 9, 159; doi:10.3390/atmos9050159, 2018
 26. Zhang, X, Y. Chu, **Y. Wang**, K. Zhang, Predicting daily PM_{2.5} concentrations in Texas using high-resolution satellite aerosol optical depth, *Sci Total Environ*, 631, 904-911, 2018
 27. Song, S., M. Gao, W. Xu, W., J. Shao, G. Shi, S. Wang, **Y. Wang**, Y. Sun, and M.B. McElroy, Fine particle pH for Beijing winter haze as inferred from different thermodynamic equilibrium models, *Atmos. Chem. Phys.*, 18, 7423-7438, 2018
 28. Zhang, Q., Q. Ma, B. Zhao, X. Liu, **Y. Wang**, B. Jia, and X. Zhang, Winter haze over North China Plain from 2009 to 2016: Influence of emission and meteorology, *Environmental Pollution*, 242, 1308-1318, 2018
 29. Cai, S., Q. Ma, S. Wang, B. Zhao, M. Brauer, A. Cohen, R.V. Martin, Q. Zhang, Q. Li, **Y. Wang**, J. Hao, J. Frostad, M. Forouzanfar, R. Burnett. Impact of air pollution control

- policies on future PM_{2.5} concentrations and their source contributions in China, *Journal of Environmental Management*, 227, 124-133, 2018
30. **Wang, Y.**, Y. Xie, W. Dong, Y. Ming, J. Wang, L. Shen, Adverse effects of increasing drought on air quality via natural processes, *Atmos. Chem. Phys.*, 17, 12827–12843, doi:10.5194/acp-2017-234, 2017
 31. Zhao, Z. and ***Wang Y.**, Influence of the West Pacific subtropical high on surface ozone daily variability in summertime over Eastern China, *Atmos. Environ*, 170, 197-204, 2017
 32. Warner, J. X., R. R. Dickerson, Z. Wei, L. L. Strow, **Y. Wang**, and Q. Liang, Increased atmospheric ammonia over the world's major agricultural areas detected from space, *Geophys. Res. Lett.*, 44, doi:10.1002/2016GL072305, 2017
 33. Gao, M., P. E. Saide, J. Xin, Y. Wang, Z. Liu, **Y. Wang**, Z. Wang, M. Pagowski, S. K. Guttikunda, and G. R. Carmichael, Estimates of health impacts and radiative forcing in winter haze in eastern China through constraints of surface PM_{2.5} predictions, *Environ. Sci. Technol.*, 51 (4), 2178-2185, 2017
 34. Li, Xin, Q. Zhang, Y. Zhang, L. Zhang, **Y. Wang**, Q. Zhang, Q., M. Li, Y. Zheng, G. Geng, T.J. Wallington, and W. Han, Attribution of PM_{2.5} exposure in Beijing–Tianjin–Hebei region to emissions: implication to control strategies, *Science Bulletin*, 2095-9273, 2017
 35. Qi, Q., M. Zhao, S. Wang, X. Ma, **Y. Wang**, Y. Gao, Q. Lin, X. Li, B. Gu, G. Li, J. Zhou, and Y. Yang, The biogeographic pattern of microbial functional genes along an altitudinal gradient of the Tibetan pasture. *Frontiers in microbiology*, 8, p.976, 2017
 36. **Wang, Y.**, B. Jia, S.-C. Wang, M. Estes, L. Shen, Y. Xie, Influence of the Bermuda High on interannual variability of summertime ozone in the Houston-Galveston-Brazoria region, *Atmos. Chem. Phys.*, 16, 15265–15276, doi:10.5194/acp-16-15265-2016, 2016
 37. Wang, Y., J. Wang, X. Xu, D. Henze, **Y. Wang**, and Z. Qu. A new approach for monthly updates of anthropogenic sulfur dioxide emissions from space: Application to China and implications for air quality forecasts, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL070204, 9931–9938, 2016
 38. **Wang Y.**, Y. Xie, L. Chai, W. Dong, Q. Zhang, and L. Zhang, Impact of the 2011 southern US drought on ground-level fine aerosol concentration in summertime, *J. Atmos. Sci.*, 72, 1075–1093, 2015
 39. Xie, Y., **Y. Wang***, K. Zhang, W. Dong, B. Lv, Y. Bai, Daily estimation of ground-level PM_{2.5} concentrations over Beijing using 3 km resolution MODIS AOD, *Environ. Sci. Technol.*, 49, 12280–12288, 2015 (**ES&T Cover Article and ACS Editors' Choice**)
 40. Jia, B., **Y. Wang***, Y. Yao, Y. Xie, A new indicator on the impact of large-scale circulation patterns on wintertime particulate matter pollution over China, *Atmos. Chem. Phys.*, 15, 11919–11929, 2015
 41. Zhang, L., L. Liu, Y. Zhao, S. Gong, X. Zhang, D. Henze, S. Capps, T. Fu, Q. Zhang, **Y. Wang**, Source attribution of particulate matter pollution over North China with the adjoint method, *Environ. Res. Lett.*, 10, 084011, 2015
 42. Jiang, Z., D. B. A. Jones, J. R. Worden, H. M. Worden, D. K. Henze, and **Y. Wang**, Regional data assimilation of multi-spectral MOPITT observations of CO over North America, *Atmos. Chem. Phys.*, 15, 6801-6814, 2015
 43. Zhang, Q.Q., **Y. Wang***, Q. Ma, Y. Xie, K. He, Regional differences in Chinese SO₂ emission control efficiency and policy implications, *Atmos. Chem. Phys.*, 15, 6521-6533, 2015

44. Zhang, B., **Y. Wang***, J. Hao, Simulating aerosol-radiation-cloud feedbacks on meteorology and air quality over eastern China under severe haze conditions in winter, *Atmos. Chem. Phys.*, 15, 2387-2404, 2015
45. Xu, J-W., R. V. Martin, A. van Donkelaar, J. Kim, M. Choi, Q. Zhang, G. Geng, Y. Liu, Z. Ma, L. Huang, **Y. Wang**, H. Chen, H. Che, P. Lin, and N. Lin. Estimating ground-level PM_{2.5} in eastern China using aerosol optical depth determined from the GOCI satellite instrument. *Atmos. Chem. Phys.*, 15, 13133-13144, 2015
46. **Wang Y.**, Q.Q. Zhang, J. Jiang, W. Zhou, B. Wang, K. He, F. Duan, Q. Zhang, S. Philip, and Y. Xie, Enhanced sulfate formation during China's severe winter haze episode in January 2013 missing from current models, *J. Geophys. Res.*, 119, doi:10.1002/2013JD021426, 2014
47. Philip, S., R. Martin, A. van Donkelaar, J. W. Lo, **Y. Wang**, D. Chen, L. Zhang, P. S. Kasibhatla, S. Wang, Q. Zhang, Z. Lu, D. G. Streets, S. Bittman and D. J. Macdonald, Global Chemical Composition of Ambient Fine Particulate Matter for Exposure Assessment, *Environ. Sci. Technol.*, 48 (22), 13060–13068, 2014
48. Chatani, S., M. Amann, A. Goel, J. Hao, Z. Klimont, A. Kumar, A. Mishra, S. Sharma, S. X. Wang, **Y. Wang**, and B. Zhao, Photochemical roles of rapid economic growth and potential abatement strategies on tropospheric ozone over South and East Asia in 2030, *Atmos. Chem. Phys.*, 14, 9259-9277, doi:10.5194/acp-14-9259-2014, 2014
49. Cooper, O. R., D. D. Parrish, J. Ziemke, N. V. Balashov, M. Cupeiro, I. E. Galbally, S. Gilge, L. Horowitz, N. R. Jensen, J.-F. Lamarque, V. Naik, S. J. Oltmans, J. Schwab, D. T. Shindell, A. M. Thompson, V. Thouret, **Y. Wang**, R. M. Zbinden, Global distribution and trends of tropospheric ozone: An observation-based review, *Elementa*, 2: 000029, 2014
50. Wang, L, S. Wang, L. Zhang, **Y. Wang**, Y. Zhang, C. Nielsen, M. B. McElroy, J. Hao, Source apportionment of atmospheric mercury pollution in China using the GEOS-Chem model, *Environmental Pollution*, 190, 166-175, 2014
51. Zhang, H., S. Wu, Y. Huang, **Y. Wang**, Effects of stratospheric ozone recovery on photochemistry and ozone air quality in the troposphere, *Atmos. Chem. Phys.*, 14, 4079-4086, 2014
52. Gao, J., H. Tian, K Cheng, L Lu, **Y Wang**, Y Wu, C Zhu, K Liu, J Zhou, X Liu, J Chen, J Hao, Seasonal and spatial variation of trace elements in multi-size airborne particulate matters of Beijing, China: Mass concentration, enrichment characteristics, source apportionment, chemical speciation and bioavailability, *Atmos. Environ*, 99, 257-265, 2014
53. Li, M., **Y Wang***, WM Ju, Effects of a remotely sensed land cover dataset with higher spatial resolution on secondary air pollutants simulation over China using the nested-grid GEOS-Chem chemical transport model, *Advances Atmos. Sci.*, 31(1), 179–187, 2014
54. **Wang, Y.**, M. Li, L. Shen, Accelerating carbon uptake in the Northern Hemisphere: evidence from the interhemispheric difference of atmospheric CO₂ concentrations, *Tellus B*, 65, 20334, <http://dx.doi.org/10.3402/tellusb.v65i0.20334>, 2013
55. **Wang, Y.**, L. Shen, S. Wu, L.J. Mickley, J. He, and J. Hao, Sensitivity of surface ozone over China to 2000-2050 global changes of climate and emissions, *Atmos. Environ.*, 75, 374-382, 2013
56. Wang, X., **Y. Wang***, J. Hao, Y. Kondo, M. Irwin, J. W. Munger, Y. Zhao, Top-down estimate of China's black carbon emissions using surface observations: sensitivity to

- observation representativeness and transport model error, *J. Geophys. Res.*, 118, 5781–5795, 2013
57. **Wang, Y.**, **Q.Q. Zhang**, K.B. He, Q. Zhang, and **L.B. Chai**, Sulfate-nitrate-ammonium aerosols over China: response to 2000-2015 emission changes of sulfur dioxide, nitrogen oxides, and ammonia, *Atmos. Chem. Phys.*, 13 (5), 2635–2652, 2013 (**Highly Cited Paper as of Apr 2019 by Web of Science**)
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88. **Wang, Y.**, M. B. McElroy, R. V. Martin, D. G. Streets, Q. Zhang, and T. M. Fu, Seasonal variability of NO_x emissions over east China constrained by satellite observations: Implications for combustion and microbial sources, *J. Geophys. Res.*, 112, D06301, 2007
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92. **Wang, Y.**, M. B. McElroy, T. Wang, and P. I. Palmer, Asian emissions of CO and NO_x: constraints from aircraft and Chinese station data, *J. Geophys. Res.*, 109, D24304, doi:10.1029/2004JD005250, 2004
93. **Wang, Y.**, M. B. McElroy, D. J. Jacob, and R. M. Yantosca, A nested grid formulation for chemical transport over Asia: Applications to CO, *J. Geophys. Res.*, 109, D22307, doi:10.1029/2004JD005237, 2004

Books and Book Chapters

- Wang, Yuxuan**, Atmospheric Modeling of Pollutant Concentrations, in *Clearer Skies Over China: Reconciling Air Quality, Climate, and Economic Goals*, 263-289. Cambridge, MA: MIT Press, 2013
- Nielsen, Chris P, Mun S Ho, Jing Cao, Yu Lei, **Yuxuan Wang**, and Yu Zhao. Summary: Carbon Taxes for 2013-2020, in *Clearer Skies Over China: Reconciling Air Quality, Climate, and Economic Goals*, 103-157. Cambridge, MA: MIT Press, 2013
- Nielsen, Chris P, Mun S Ho, Yu Zhao, **Yuxuan Wang**, Yu Lei, and Jing Cao. Summary: Sulfur Mandates and Carbon Taxes for 2006-2010, in *Clearer Skies Over China: Reconciling Air Quality, Climate, and Economic Goals*, 59-102. Cambridge, MA: MIT Press, 2013
- McElroy, Michael B. *Energy: Perspectives, Problems and Prospects (Chinese Language Edition)*, Translated by **Yuxuan Wang**, Jiming Hao and Xi Lu, Beijing: Science Press, 2011

Invited Oral Presentations at Professional Conferences and Meetings

1. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, 2019: *Impacts of drought on air quality*
2. Texas Air Quality Workshop - Past, Present & Potential Future of Texas Air Quality, Austin, TX, 2019: *Modeling and data analysis of 'external' factors causing changes in Texas air quality*
3. International Global Atmospheric Chemistry (IGAC) Science Conference, Breckenridge, CO, 2016: *"Smart" control of emissions from power generation in China and policy implications*
4. 252nd American Chemistry Society (ACS) National Meeting, Philadelphia, PA, 2016: *Secondary inorganic aerosols in China: contributions from emissions, chemistry, and meteorology*
5. Harvard China Fund symposium on China 2035, Shanghai, China, 2014: *Air Quality Challenges in China: Emissions, Chemistry, and Climate*
6. GOSAT Workshop, Tokyo, Japan, 2013: *Using CO₂: CO correlations to constrain CO₂ sources: applications from global to urban scales*
7. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, 2012: *Evaluating China's BC emissions using surface observations: sensitivity to observation representativeness and transport model error*
8. 11th LASG Annual Symposium on Earth System Models, Zhuhai, China, 2012: *High resolution atmospheric chemistry models*
9. Towards a Next Generation of Air Quality Monitoring Expert Review Workshop, Seoul, South Korea, 2012: *Air quality monitoring and indicators in China: challenges and opportunities*
10. International Workshop on Black Carbon in China, Beijing, China, 2012: *Model Constraints of Black Carbon Emissions in China*
11. International Symposium on Near Real Time Data Application in Air Quality Forecasts, Hangzhou, China, 2011: *Top-down Constraints on Chinese Emissions Using Near-Real-Time Satellite Data*
12. Air Quality and Climate Conference, Kona, HI, 2011: *Sensitivity of China's ozone air quality to 2000-2050 global changes of climate and emissions*

13. Tropospheric Emission Monitoring Internet Service (TEMIS) User Workshop, Francati, Italy, 2007: *Traffic restrictions associated with the Sino-African Summit: reductions of NO_x detected from space*
14. Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS VII), Yellow Stone, WY, 2005: *Emissions from China: implications for the regional and global environment*

Invited Seminars

1. University of Toronto Center for Global Change Science Distinguished Lecture Series, 2019: *Impacts of drought on air quality*
2. Baylor University, 2018: *Interactions between drought and atmospheric composition*
3. University of Science and Technology in China, 2018: *Connecting the Dots: Air Pollution and Climate Change*
4. Harvard University, 2017: *Air Pollution and Climate Change Challenges in China*
5. University of California at Los Angeles, 2016: *Connecting the Dots: Air Pollution and Climate Change*
6. NASA Jet Propulsion Laboratory, 2015: *Impact of Large-Scale Circulation on Air Pollution*
7. University of Utah, 2015: *Air Pollution and Climate Change: Challenges for Science and Policy*
8. University of Iowa, 2015: *Air Pollution: Science, Policy, and Informatics*
9. Texas Commission on Environmental Quality, 2014: *Model-observation fusion approach to understand air quality challenges*
10. Rice University, 2014: *Air quality challenges in China: recent successful and unsuccessful stories*
11. Texas A&M University, 2013: *Air quality challenges in China: emissions, chemistry, meteorology, and global impact*
12. Washington University at St. Louis, 2013: *PM_{2.5} pollution over China: understanding the roles of chemistry, meteorology, and emissions*
13. National Institute for Environmental Studies, Tsukuba, Japan, 2013: *Understanding the sources of inorganic and BC aerosols in China*
14. Harvard University, Cambridge, MA, 2013: *Top-down constraints on Chinese emissions using atmospheric measurements*
15. National Satellite Meteorological Center, China Meteorological Administration, 2012: *Inversion studies using the GEOS-Chem model*
16. California Institute of Technology, 2012: *Understanding China's air pollution through species correlations*
17. Michigan Technical University, 2011: *China's air quality problem: challenges for science and policy*
18. NOAA Earth System Research Laboratory, 2010: *Observations of multi-species at a rural site in China: constraints on regional emissions*

Presentations at Professional Conferences/Meetings

1. 101st American Meteorological Society Annual Meeting, Virtual Meeting, 2021: *Satellite-derived Constraints on the Effect of Drought Stress on Biogenic Isoprene Emissions in the Southeast US (oral)*

2. Community Earth System Model (CESM) Workshop, Boulder, CO, 2019: Impacts of droughts on atmospheric composition and chemistry feedbacks (oral)
3. American Geophysical Union (AGU) Fall Meeting, Washington, DC, 2018: *Recent changes of NO_x in China observed from OMPS NM* (oral)
4. International Global Atmospheric Chemistry (IGAC) Science Conference, Takamatsu, Japan, 2018: *Impacts of drought on air quality* (oral)
5. 1st Regional GEOS-Chem Asia Meeting (GCA-1), Nanjing, China, 2018: *Recent changes of NO_x for China observed from OMPS* (oral)
6. Texas Air Quality Symposium, Austin, TX, 2018: *Transport of Central American Fire Emissions to Texas: Climatological pathways and air quality impacts* (oral)
7. Atmospheric Radiation Measurement (ARM)/Atmospheric System Research (ASR) Joint User Facility and Principal Investigator meeting, Washington, DC, 2018: *Changing Aerosol Chemical and Microphysical Properties Due to Drought: Analysis of the SGP Aerosol Data* (poster)
8. American Geophysical Union (AGU) Fall Meeting, New Orleans, LA, 2017: *Effects of the Bermuda High and southerly low-level jets upon background and peak ozone concentrations in Houston* (oral)
9. Gordon Research Conference on Atmospheric Chemistry, Newry, ME, 2017: *Impact of drought on air quality* (poster)
10. 3rd workshop on Atmospheric Composition and Asian Monsoon (ACAM), Guangzhou, China, 2017: *Influence of the Western Pacific Subtropical High on summertime ozone variability in East China* (oral)
11. 8th International GEOS-Chem Meeting (IGC8), Cambridge, MA, 2017: *Adverse Effects of Drought on Air Quality in the US* (oral)
12. 13th Annual Meeting of Asia Oceania Geosciences Society (AOGS), Beijing, China, 2016: *Air quality in China and the large-scale pressure systems of the East Asian Monsoon* (oral)
13. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, 2015: *Impact of Large-scale Circulation Patterns on Surface Ozone Variability in Houston-Galveston-Brazoria* (poster)
14. Texas Air Quality Symposium, Austin, TX, 2015: *Understanding the relationship between HGB ozone and large-scale circulation* (oral)
15. 17th Global Emissions Initiative (GEIA) Conference, Beijing, China, 2015: *Emissions Scenarios for Effective Policies: China's SO₂ control* (oral)
16. 7th International GEOS-Chem Meeting (IGC7), Cambridge, MA, 2015: *Drought impacts on PM and Ozone in the US* (oral)
17. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, 2014: *Modeling the contributions of emission, meteorology, and chemistry to high PM_{2.5} levels over China* (oral)
18. 16th Global Emissions Initiative (GEIA) Conference, Boulder, CO, 2014: *Sources of PM_{2.5} during the 2013 winter haze in China constrained by surface observations* (oral)
19. NASA Air Quality Applied Sciences Team (AQA) 8th semi-annual meeting, Atlanta, GA, 2014: *Impact of the 2011 Southern US Drought on Surface PM_{2.5} in Summertime* (oral)
20. 6th International GEOS-Chem Meeting (IGC6), Cambridge, MA, 2013: *PM_{2.5} pollution over China: understanding the roles of chemistry and meteorology* (oral)

21. 15th Global Emissions Initiative (GEIA) Conference, Toulouse, France, 2012: *Evaluating China's BC emission inventory using BC to CO ratios: integrated analysis of in situ observations and modeling (oral)*
22. TransCom Meeting, Nanjing, China, 2012: *Matrix monthly inversion for estimating inter-annual and seasonal CO₂ fluxes (oral)*
23. 11th International Conference on Atmospheric Sciences and Applications to Air Quality, Jinan, China, 2009: *Ozone air quality during the Beijing 2008 Olympics: effectiveness of emission restrictions (oral)*
24. American Geophysical Union (AGU) Joint Assembly, Acapulco, Mexico, 2007: *Regional and local influences on surface O₃ over Beijing: constraints from integrated surface observations and modeling (oral)*
25. Western Pacific Geophysical Meeting, Beijing, China, 2006: *Seasonal variability of NO_x emissions over east China constrained by satellite observation (oral)*

Courses Taught

At Univ. of Houston:

Fall 2016	GEOL 6396: Graduate Seminar for Atmospheric Sciences [8 students]
Spring 2017	GEOL 4397: Atmospheric Biogeochemistry (undergraduate) [4] (<i>new course</i>) GEOL 6397: Atmospheric Biogeochemistry (graduate) [5] (<i>new course</i>)
Fall 2017	GEOL 1302: Introduction to Climate Change [152] GEOL 1102: Introduction to Climate Change Laboratory [40]
Spring 2018	GEOL 3342: Principals of Air Pollution [10] GEOL 4334: Environmental Data Analysis [25] GEOL 4334: Environmental Data Analysis Lab [25] GEOL 6328: Atmospheric Data Analysis and Statistics [2]
Fall 2018	GEOL 1302: Introduction to Climate Change [163] GEOL 1102: Introduction to Climate Change Laboratory [49] GEOL 6396: Graduate Seminar in Atmospheric Sciences [9]
Spring 2019	GEOL 4347: Atmospheric Biogeochemistry (undergraduate) [15] GEOL 4347: Atmospheric Biogeochemistry Laboratory [15] GEOL 6370: Atmospheric Biogeochemistry (graduate) [13]
Fall 2019	GEOL 1302: Introduction to Climate Change [274] GEOL 1102: Introduction to Climate Change Laboratory [68]
Spring 2020	GEOL 1302: Introduction to Climate Change [511] GEOL 1102: Introduction to Climate Change Laboratory [117] GEOL 3342: Principals of Air Pollution [23] GEOL 4334: Environmental Data Analysis [34] GEOL 4334: Environmental Data Analysis Lab [34] GEOL 6328: Atmospheric Data Analysis and Statistics [6]
Fall 2020	GEOL 6396:: Graduate Seminar for Atmospheric Science [7]
Spring 2021	GEOL 1302: Introduction to Climate Change [292] GEOL 1102: Introduction to Climate Change Laboratory [91]
Fall 2021	GEOL 4334: Environmental Data Analysis [36] GEOL 4334: Environmental Data Analysis Lab [36] GEOL 6328: Atmospheric Data Analysis and Statistics [14]
Spring 2022	GEOL 1302: Introduction to Climate Change [487] GEOL 1102: Introduction to Climate Change Laboratory [146]

GEOL 3342: Principals of Air Pollution [23]

Other Universities

Instructor, *Introduction to Meteorology and Weather Forecast*, Texas A&M Galveston, 2015
 Instructor, *Advanced Computer Application*, Texas A&M Galveston, Fall 2014 - 2015
 Instructor, *Introduction to Computing and Data Display*, Texas A&M Galveston, Spring 2014-2015
 Instructor, *Atmospheric Chemistry*, Tsinghua University, Fall 2010-2012
 Instructor, *Global Pollution Transport and Modeling*, Tsinghua University, Spring 2011
 Co-Instructor, *China's Energy Economy: Perspectives from the Past, Challenges for the Future*, Harvard Univ., Spring 2008
 Head Teaching Fellow, *Energy, Environment and Industrial Development* (Harvard College Core Curriculum), Harvard Univ., Spring 2005
 Head Teaching Fellow, *Introduction to Environmental Sciences: Atmosphere, Ocean, and Biosphere*, Harvard Univ., Fall 2003- 2005
 Teaching Fellow, *Introduction to Atmospheric Sciences* (Harvard College Core Curriculum), Harvard Univ., Spring 2003

Students and Postdoc Supervised as ChairCurrent

Postdoc: Xueying Liu, *Univ. of Houston*, 2021 - present

Ph.D. Students:

Shihab Shahriar, *Univ. of Houston*, 2022 – present
 Shailaja Wasti, *Univ. of Houston*, 2021 – present
 Meghan Harris, *Univ. of Houston*, 2021 – present
 Ehsan Soleimanian, *Univ. of Houston*, 2021 – present
 Tabitha Lee, *Univ. of Houston*, 2020 – present
 Travis Griggs, *Univ. of Houston*, 2018 – present
 Claudia Bernier, *Univ. of Houston*, 2018 – present
 Wei Li, *Univ. of Houston*, 2018 – present
 Elizabeth Klovenski, *Univ. of Houston*, 2017 – present
 Nan Lin, *Univ. of Houston & Tsinghua Univ.*, 2015 – present

Previous (PhD graduated = 5, MS graduated = 8)

Postdoc: Sing-Chun Wang, *Univ. of Houston*, 2019 – 2020

Manasi Mahish, *Univ. of Houston*, 2017-2018

Ph.D.: Sing-Chun Wang, *Univ. of Houston*, 2016 – 2019 (Ph.D. awarded 05/19)

Sing-Chun Wang, *Texas A&M Univ. Galveston Campus*, 2015 – 2016

Zijian Zhao, *Tsinghua Univ.*, 2014 – 2019 (Ph.D. awarded 07/19)

Beixi Jia, *Tsinghua Univ.*, 2013 – 2018 (Ph.D. awarded 07/18)

Yuanyu Xie, *Tsinghua Univ.*, 2013 – 2018 (Ph.D. awarded 07/18)

Yang Nan, *Tsinghua Univ.*, 2012 – 2018 (Ph.D. awarded 09/18)

M.S.: Shan Huang, *Tsinghua Univ.*, 2015 – 2018

Yu Yao, *Tsinghua Univ.*, 2013 – 2016

Libao Chai, *Tsinghua Univ.*, 2011 – 2014

Zhengyu Chen, *Tsinghua Univ.*, 2011 – 2014

Mingwei Li, *Tsinghua Univ.*, 2010 - 2013

Lulu Shen, *Tsinghua Univ.*, 2010 – 2012
Xuan Wang, *Tsinghua Univ.*, 2009 – 2012
Yuqiang Zhang, *Tsinghua Univ.*, 2008 – 2011

Undergraduate thesis students:

Qianqian Zhang, *Tsinghua Univ.*, 2010
Shicheng Xu, *Tsinghua Univ.*, 2008

Students Supervised as Co-Chair (with publications)

Ph.D.: Qianqian Zhang, *Tsinghua Univ.*, 2010 – 2015
Bin Zhang, *Tsinghua Univ.*, 2010 – 2015
Jingwei He, *Tsinghua Univ.*, 2008 – 2012
Dan Chen, *Tsinghua Univ.*, 2007 – 2008

Student Thesis/Dissertation Committee

Ph.D.:

Jincheol Park, *Univ. of Houston*, 2022 – present
Ali Mousavinezhad, *Univ. of Houston*, 2021 – present
Ahmed Khan Salman, *Univ. of Houston*, 2021 – present
Ellen Creecy, *Univ. of Houston*, 2019 – present
Yannic Lops, *Univ. of Houston*, 2018 – 2021
Jia Jung, *Univ. of Houston*, 2017 – 2021
Aaron Studwell, *Univ. of Houston*, 2017 – 2020
Shuting Yang, *Univ. of Houston*, 2016 – 2018
Lei Liu, *Univ. of Houston*, 2016
Allison Myers-Pigg, *Texas A&M Univ.*, 2014 – 2016

M.S.:

Matilde Di Sparti, *Univ. of Houston*, 2018 – 2019
Bowen Pan, *Texas A&M Univ.*, 2015

Undergraduate Student Researchers (Non-Thesis) Supervised

Tabitha Lee, *Univ. of Houston*, 2019 – 2020
Alexander Hume Spike, *Univ. of Houston*, 2019 – 2020
Connor Coligan, *Univ. of Houston*, 2019 – 2020
Larry Guan, *Univ. of Houston*, 2018
Hennah-Jean I. Pascual, *Univ. of Houston*, 2017
Paula Andrea Torrado Plazas, *Univ. of Houston*, 2016 – 2017
Aaron Murtishaw, *Texas A&M Univ. Galveston Campus*, 2016
David Lampton, *Texas A&M Univ. Galveston Campus*, 2016

High School Students Mentored for Science Projects

Nguyen Phan, Carnegie Vanguard High School (Houston ISD), 2018 - 2019

University Service

Search Committee Chair for Presidential Frontier Faculty in Climate Dynamics and Modeling, 2022, *Univ. of Houston*
Search Committee Member for Faculty in Tropical Meteorology, 2022, *Univ. of Houston*
EAS Merit Review Committee Member, 2021, *Univ. of Houston*

EAS Department Seminar Committee Chair (2020 – present) and Member (2018 – 2020),
Univ. of Houston
 EAS Teaching Assistant Tasking Force Member, *Univ. of Houston*, 2020 - present
 Faculty Affiliate, Institute of Climate and Atmospheric Sciences, *Univ. of Houston*, 2019 –
 present
 Faculty judge for Earth and Atmospheric Sciences Research Day, *Univ. of Houston*, 2017-
 2018
 Undergraduate Curriculum Committee, Dept. of Marine Sciences, *Texas A&M Univ.*
Galveston Campus, 2014-2015
 Review Panel for Texas Association of Environmental Professionals Scholarship, Dept. of
 Marine Sciences, *Texas A&M Univ. Galveston Campus*, 2013-2014
 Deputy Director, Ministry of Education Key Laboratory for Earth System Modeling,
Tsinghua Univ., 2011-2013
 Undergraduate Faculty Advisor, School of Environment, *Tsinghua Univ.*, 2009- 2011

Editorship and Editorial Board

Guest Editor, *Atmosphere* Special Issue on ‘Urban Air Pollution’, 2016-2017
 Guest Editor, *Atmospheric Environment* Special Issue on "Air Pollution in China: Air
 Pollution in the Beijing-Tianjin-Hebei region", 2014-2015
 Editorial Board, *Current Pollution Reports*, 2014-2015
 Editorial Board, *Chinese Journal of Atmospheric Science*, 2013-2016

Organization of Professional Meetings

Co-Convener, “Regional Air Quality, American Meteorological Society Annual Conference,
 2022
 Co-Convener, American Geophysical Union (AGU) Fall Meeting session on ‘Understanding,
 Evaluating and Improving Emissions Through Atmospheric Observations’, San
 Francisco, CA, 2016
 Member of the Organizing Committee, the 17th Global Emissions Initiative (GEIA)
 Conference, Beijing, China, 2015
 Co-Convener, European Geosciences Union General Assembly session on ‘Chemistry-
 Climate Interactions, and Metrics to Inform Climate and Environmental Policies and
 Assessments’, Vienna, Austria, 2014
 Co-Convener, AGU Western Pacific Meeting session on ‘Urban Emission, Flux
 Measurements, and Air Quality Studies’, 2010

Invited Reviewer for Grant Proposals

NOAA AC4 Program, 2021
 Health Effects Institute, 2018, 2019, 2021
 Research Grants Council (RGC) of Hong Kong, 2016, 2017, 2018, 2019, 2020, 2021, 2022
 NASA review panel, 2014, 2017, 2019, 2020
 Netherlands Space Office (NSO), 2017
 Texas A&M University and the Consejo Nacional de Ciencia y Tecnología (CONACYT)
 research program, 2016
 National Science Foundation (NSF), 2009, 2015
 National Natural Science Foundation of China (NSFC), 2012

Invited Reviewer for Journal Manuscripts

Air Quality Atmosphere and Health
Atmosphere
Atmospheric Chemistry and Physics
Atmospheric Environment
Environmental Science and Pollution Research
Environmental Science & Technology
Environmental Science & Technology Letters
Geophysical Research Letters
Global Biogeochemical Cycles
Journal of Atmospheric Chemistry
Journal of Geophysical Research-Atmospheres
Journal of the Air & Waste Management Association
Proceedings of the National Academy of Sciences
Remote Sensing of the Environment
Tellus-B

Media Coverage

Aug 2014, The International New York Times, “Cities’ Air Problems Only Get Worse With Climate Change”
Oct 2013, The New York Times, Op-Ed, “*Clearing the Air in China*”
Jun 2013, The Lancet, “China's skies: a complex recipe for pollution with no quick fix”
Nov 2010, China Energy News, “Combustion efficiency is increased in Beijing”
Aug 2007, NASA Earth Science Research Features 2007, Sensing Our Planet, “*Pollution trials for the Beijing Olympics*”
May 2007, Shanghai Daily, “Study shows Beijing traffic controls cut pollution”
May 2007, ScienceNOW Daily News, “*Smog takes a holiday*”