

Yuxuan Wang

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Education

2005 Ph.D. Earth and Planetary Sciences, *Harvard University*

Thesis Title: Emissions from China: Implications for the Regional and Global Environment

Advisor: Prof. Michael B. McElroy

2000 B.E. Environmental Engineering, *Tsinghua University* (Beijing, China)

2000 B.E. (minor) Computer Technology and Application, *Tsinghua University*

Professional Appointments

2016 – Present 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 Claudia Bernier awarded NASA ASTAR Fellowship, 2019
Ph.D. student Claudia Bernier selected for the NCAR/ACOM Ralph C. Cicerone Fellowship, 2019
Ph.D. student Elizabeth Klovenski awarded NASA ASTAR 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. 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
2. 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)
3. 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 (\$287,310 to YW)
4. 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 (\$154,000 to YW)
5. 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
6. 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

7. 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 (\$13,455 to YW)
8. 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
9. 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 (AQRP)**; PI: **Yuxuan Wang**, Co-PI: Robert Talbot (UH); \$191,367 (\$128,732 to YW)
10. 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
11. 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. N. Lin, **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
2. 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
3. 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
4. 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
5. 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
6. 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
7. 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
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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

15. 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
16. 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
17. 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
18. 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
19. **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
20. 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
21. 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
22. 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
23. 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
24. 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
25. **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
26. 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
27. **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
28. 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**)

29. 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
30. 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
31. 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
32. 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
33. 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
34. 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
35. **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
36. 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
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
 43. **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
 44. **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
 45. 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
 46. **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**)
 47. Frost, G.J., P. Middleton, L. Tarrasón, C. Granier, A. Guenther, B. Cardenas,& **Y. Wang**. New Directions: GEIA's 2020 vision for better air emissions information, *Atmos. Environ.*, 81, 710-712, 2013
 48. Kharol, S.K., R. V. Martin, S. Philip, S. Vogel, D. K. Henze, D. Chen, **Y. Wang**, Q. Zhang, C. L. Heald, Persistent sensitivity of Asian aerosol to Emissions of nitrogen oxides, *Geophys. Res. Lett.*, 40 (5), 1021-1026, doi: 10.1002/grl.50234, 2013
 49. C. Shim, J. Lee, and **Y. Wang**, Effect of continental sources and sinks on the seasonal and latitudinal gradient of atmospheric carbon dioxide over East Asia, *Atmos. Environ.*, 79, 853-860, 2013
 50. He, J., **Y. Wang***, J.M. Hao, L.L. Shen, L. Wang, Variations of surface O₃ in August at a rural site near Shanghai: Influences from the West Pacific Subtropical High and anthropogenic emissions, *Environmental Science and Pollution Research*, doi:10.1007/s11356-012-0970-5, 2012
 51. Shen, L. and ***Wang, Y.**, Changes in tropospheric ozone levels over three representative regions of China observed from space by the Tropospheric Emission Spectrometer (TES), 2005-2010, *Chinese Science Bulletin*, 57: 1-4, doi: 10.1007/s11434-012-5099-x, 2012
 52. **Wang, Y.** and Sun, T. Y., Life cycle assessment of CO₂ emissions from wind power Plants: methodology and case studies, *Renewable Energy*, 43, 30-36, doi:10.1016/j.renene.2011.12.017, 2012
 53. van Donkelaar, A., R.V. Martin, A.N. Pasch, J.J. Szykman, L. Zhang, **Y.X. Wang**, D. Chen, Improving the accuracy of daily satellite-derived ground-level fine aerosol concentration estimates for North America, *Environ. Sci. Technol.*, 46 (21), pp 11971–11978, DOI: 10.1021/es3025319, 2012
 54. Zhang, L., D. J. Jacob, E. M. Knipping, N. Kumar, J. W. Munger, C. C. Carouge, A. van Donkelaar, **Y. Wang**, D. Chen, Nitrogen deposition to the United States: distribution, sources, and processes, *Atmos. Chem. Phys.*, 12, 4539-4554, doi:10.5194/acp-12-4539-2012, 2012

55. Fu, T.-M., J. J. Cao, X. Y. Zhang, S. C. Lee, Q. Zhang, Y. M. Han, W. J. Qu, Z. Han, R. Zhang, **Y. Wang**, D. Chen, and D. K. Henze, Carbonaceous aerosols in China: top-down constraints on primary sources and estimation of secondary contribution, *Atmos. Chem. Phys.*, 12, 2725–2746, 2012
56. **Wang, Y.**, X. Wang, Y. Kondo, M. Kajino, J. W. Munger, J. Hao, Measurements of black carbon and its correlation with trace gases at a rural site in Beijing: implications for bottom-up emissions, *J. Geophys. Res.*, 116, D24304, doi:10.1029/2011JD016575, 2011
57. **Wang, Y.**, Y.Q. Zhang, J.M. Hao and M. Luo, Seasonal and spatial variability of surface ozone over China: contributions from background and domestic pollution, *Atmos. Chem. Phys.*, 11, 3511–3525, 2011
58. Zhang, L., D.J. Jacob, N.V. Smith-Downey, D.A. Wood, D. Blewitt, C.C. Carouge, A. van Donkelaar, D.B.A. Jones, L.T. Murray, and **Y. Wang**, Improved estimate of the policy-relevant background ozone in the United States using the GEOS-Chem global model with $1/2^\circ \times 2/3^\circ$ horizontal resolution over North America, *Atmos. Environ.*, 45(37), 6769-6776, 2011
59. Barkley, M., P. Palmer, L. Ganzeveld, A. Arneth, D. Hagberg, T. Karl, A. Guenther, F. Paulot, P. Wennberg, J. Mao, T. Kurosu, K. Chance, J.-F. Muller, I. De Smedt, M. Van Roozendaal, D. Chen, **Y. Wang**, and R. Yantosca, Can a 'state of the art' chemistry transport model simulate Amazonian tropospheric chemistry?, *J. Geophys. Res.*, 116, D16302, 2011
60. González A., G., Allen, N. D. C., Bernath, P. F., Boone, C. D., McLeod, S. D., Manney, G. L., Toon, G. C., Carouge, C., **Wang, Y.**, Wu, S., Barkley, M. P., Palmer, P. I., Xiao, Y., and Fu, T. M.: Ethane, ethyne and carbon monoxide concentrations in the upper troposphere and lower stratosphere from ACE and GEOS-Chem: a comparison study, *Atmos. Chem. Phys.*, 11, 9927-9941, doi:10.5194/acp-11-9927-2011, 2011
61. **Wang, Y.**, J.W. Munger, S.C. Xu, M. B. McElroy, J.M. Hao, C.P. Nielsen, and M. Hong, CO₂ and its correlation with CO at a rural site near Beijing: implications for combustion efficiency in China, *Atmos. Chem. Phys.*, 10, 8881–8897, 2010
62. **Wang, Y.**, J.M. Hao, M. B. McElroy, J.W. Munger, M. Hong, and C.P. Nielsen, Year round measurements of O₃ and CO at a rural site near Beijing: seasonal variations and relationships, *Tellus*, 62B, 228-241, 2010
63. **Wang, Y.**, Y.Q. Zhang, and J.M. Hao, Review on the applications of Tropospheric Emissions Spectrometer to air quality research: perspectives for China, *Front. Environ. Sci. Engin. China*, 4(1), 12-19, doi: 10.1007/s11783-010-0012-9, 2010
64. Wang S.W., D. G Streets, Q. Zhang, K. He, D. Chen, S. Kang, Z. Lu and **Y. Wang**, Satellite detection and model verification of NO_x emissions from power plants in Northern China, *Environ. Res. Lett.*, 5, 044007, 2010
65. Yu FQ, G. Luo, T. S. Bates, B. Anderson, A. Clarke, V. Kapustin, R. M. Yantosca, **Y. Wang**, and S. Wu, Spatial distributions of particle number concentrations in the global troposphere: simulations, observations, and implications for nucleation mechanisms, *J. Geophys. Res.*, 115, D17205, doi:10.1029/2009JD013473, 2010
66. Wang, J., X. Xu, R. Spurr, **Y. Wang**, and E. Drury, Improved algorithm for MODIS satellite retrievals of aerosol optical thickness over land in dusty atmosphere: Implications for air quality monitoring in China, *Remote Sensing of Environment*, 114, 2575-2583, 2010

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70. **Wang, Y.**, J.M. Hao, M. B. McElroy, J.W. Munger, M. Hong, D. Chen and C.P. Nielsen, Ozone air quality during the 2008 Beijing Olympics – effectiveness of emission restrictions, *Atmos. Chem. Phys.*, 9, 5237-5251, 2009
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72. **Wang, Y.X.**, M. B. McElroy, J.W. Munger, J.M. Hao, C.P. Nielsen, M. Hong, and C.Y. Shen, Variations of O₃ and CO in summertime at a rural site near Beijing, *Atmos. Chem. Phys.*, 8, 6355-6363, 2008
73. Wang, J.S., M.B. McElroy, J.A. Logan, P.I. Palmer, W.L. Chameides, **Y. Wang**, and I.A. Megretskaya, A Quantitative assessment of uncertainties affecting estimates of global mean OH derived from methyl chloroform observations, *J. Geophys. Res.*, 113, D12302, 2008
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76. Fu, T.-M., D. J. Jacob, P. I. Palmer, K. Chance, **Y. Wang**, B. Barletta, D. R. Blake, J. C. Stanton, and M. J. Pilling, Space-based formaldehyde measurements as constraints on volatile organic compound emissions in East and South Asia, *J. Geophys. Res.*, 112, D06312, 2007
77. **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
78. McElroy, M.B. and **Wang, Y.** Human and animal wastes: implications for atmospheric N₂O and NO_x, *Global Biogeochem. Cycles*, 19, GB2008, doi:10.1029/2004GB002429, 2005
79. Li, Q., D. J. Jacob, R. Park, **Y. Wang**, C. L. Heald, R. Hudman, R. M. Yantosca, R. V. Martin, and M. Evans, North American pollution outflow and the trapping of convectively lifted pollution by upper-level anticyclone, *J. Geophys. Res.*, 110, D10301, doi:10.1029/2004JD005039, 2005

80. Fiore, A.M., L.W. Horowitz, D. W. Purves, H. Levy II, M. Evans, **Y. Wang**, Q. Li, and R. M. Yantosca, Evaluating the contribution of changes in isoprene emissions to surface ozone trends over the eastern United States, *J. Geophys. Res.*, 110, D12303, doi:10.1029/2004JD005485, 2005
81. **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
82. **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. 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*
2. International Global Atmospheric Chemistry (IGAC) Science Conference, Breckenridge, CO, 2016: *"Smart" control of emissions from power generation in China and policy implications*
3. 252nd American Chemistry Society (ACS) National Meeting, Philadelphia, PA, 2016: *Secondary inorganic aerosols in China: contributions from emissions, chemistry, and meteorology*
4. Harvard China Fund symposium on China 2035, Shanghai, China, 2014: *Air Quality Challenges in China: Emissions, Chemistry, and Climate*
5. GOSAT Workshop, Tokyo, Japan, 2013: *Using CO₂: CO correlations to constrain CO₂ sources: applications from global to urban scales*
6. 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*
7. 11th LASG Annual Symposium on Earth System Models, Zhuhai, China, 2012: *High resolution atmospheric chemistry models*

8. 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*
9. International Workshop on Black Carbon in China, Beijing, China, 2012: *Model Constraints of Black Carbon Emissions in China*
10. 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*
11. Air Quality and Climate Conference, Kona, HI, 2011: *Sensitivity of China's ozone air quality to 2000-2050 global changes of climate and emissions*
12. 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*
13. 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. Baylor University, 2018: *Interactions between drought and atmospheric composition*
2. University of Science and Technology in China, 2018: *Connecting the Dots: Air Pollution and Climate Change*
3. Harvard University, 2017: *Air Pollution and Climate Change Challenges in China*
4. University of California at Los Angeles, 2016: *Connecting the Dots: Air Pollution and Climate Change*
5. NASA Jet Propulsion Laboratory, 2015: *Impact of Large-Scale Circulation on Air Pollution*
6. University of Utah, 2015: *Air Pollution and Climate Change: Challenges for Science and Policy*
7. University of Iowa, 2015: *Air Pollution: Science, Policy, and Informatics*
8. Texas Commission on Environmental Quality, 2014: *Model-observation fusion approach to understand air quality challenges*
9. Rice University, 2014: *Air quality challenges in China: recent successful and unsuccessful stories*
10. Texas A&M University, 2013: *Air quality challenges in China: emissions, chemistry, meteorology, and global impact*
11. Washington University at St. Louis, 2013: *PM_{2.5} pollution over China: understanding the roles of chemistry, meteorology, and emissions*
12. National Institute for Environmental Studies, Tsukuba, Japan, 2013: *Understanding the sources of inorganic and BC aerosols in China*
13. Harvard University, Cambridge, MA, 2013: *Top-down constraints on Chinese emissions using atmospheric measurements*
14. National Satellite Meteorological Center, China Meteorological Administration, 2012: *Inversion studies using the GEOS-Chem model*
15. California Institute of Technology, 2012: *Understanding China's air pollution through species correlations*
16. Michigan Technical University, 2011: *China's air quality problem: challenges for science and policy*

17. 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. Community Earth System Model (CESM) Workshop, Boulder, CO, 2019: Impacts of droughts on atmospheric composition and chemistry feedbacks (oral)
2. American Geophysical Union (AGU) Fall Meeting, Washington, DC, 2018: *Recent changes of NO_x in China observed from OMPS NM* (oral)
3. International Global Atmospheric Chemistry (IGAC) Science Conference, Takamatsu, Japan, 2018: *Impacts of drought on air quality* (oral)
4. 1st Regional GEOS-Chem Asia Meeting (GCA-1), Nanjing, China, 2018: *Recent changes of NO_x for China observed from OMPS* (oral)
5. Texas Air Quality Symposium, Austin, TX, 2018: *Transport of Central American Fire Emissions to Texas: Climatological pathways and air quality impacts* (oral)
6. 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)
7. 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)
8. Gordon Research Conference on Atmospheric Chemistry, Newry, ME, 2017: *Impact of drought on air quality* (poster)
9. 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)
10. 8th International GEOS-Chem Meeting (IGC8), Cambridge, MA, 2017: *Adverse Effects of Drought on Air Quality in the US* (oral)
11. 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)
12. 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)
13. Texas Air Quality Symposium, Austin, TX, 2015: *Understanding the relationship between HGB ozone and large-scale circulation* (oral)
14. 17th Global Emissions Initiative (GEIA) Conference, Beijing, China, 2015: *Emissions Scenarios for Effective Policies: China's SO₂ control* (oral)
15. 7th International GEOS-Chem Meeting (IGC7), Cambridge, MA, 2015: *Drought impacts on PM and Ozone in the US* (oral)
16. 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)
17. 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)

18. NASA Air Quality Applied Sciences Team (AQASt) 8th semi-annual meeting, Atlanta, GA, 2014: *Impact of the 2011 Southern US Drought on Surface PM_{2.5} in Summertime (oral)*
19. 6th International GEOS-Chem Meeting (IGC6), Cambridge, MA, 2013: *PM_{2.5} pollution over China: understanding the roles of chemistry and meteorology (oral)*
20. 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)*
21. TransCom Meeting, Nanjing, China, 2012: *Matrix monthly inversion for estimating inter-annual and seasonal CO₂ fluxes (oral)*
22. 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)*
23. 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)*
24. 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:

- Spring 2019 *Atmospheric Biogeochemistry*, Univ. of Houston, class size: 23 students
 Fall 2018 *Introduction to Climate Change*, Univ. of Houston, class size: 166 students
Graduate Seminar for Atmospheric Sciences, Univ. of Houston, class size: 9
 Spring 2018 *Environmental Data Analysis*, Univ. of Houston, class size: 25 students
Principals of Air Pollution, Univ. of Houston, class size: 9 students
 Fall 2017 *Introduction to Climate Change*, Univ. of Houston, class size: 148 students
 Spring 2017 *Atmospheric Biogeochemistry*, Univ. of Houston, class size: 10 students (*new course*)
 Fall 2016 *Graduate Seminar for Atmospheric Sciences*, Univ. of Houston, class size: 8 students

At 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 Chair**Current**

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

Ph.D. Students:

Sujan Ojha, *Univ. of Houston*, 2019 – present

Elizabeth Klovenski, *Univ. of Houston*, 2017 – present

Claudia Bernier, *Univ. of Houston*, 2019 – present

Wei Li, *Univ. of Houston*, 2018 – present

Nan Lin, *Univ. of Houston & Tsinghua Univ.*, 2015 – present

Previous (total advisees = 16; PhD graduated = 3, MS graduated = 8)

Postdoc: 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.:

Yannic Lops, *Univ. of Houston*, 2018 – present

Jia Jung, *Univ. of Houston*, 2017 – present

Aaron Studwell, *Univ. of Houston*, 2017 – present

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 – present
Connor Coligan, *Univ. of Houston*, 2019 – present
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

EAS Department Seminar Committee member, *Univ. of Houston*, 2018 – 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, 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

Health Effects Institute, 2018

Research Grants Council (RGC) of Hong Kong, 2016 - 2018
NASA Atmospheric Composition: Laboratory Research (ACLS), review panel, 2017
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
NASA Atmospheric Composition Campaign Data Analysis and Modeling (ACCDAM),
review panel, 2014
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*"