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EDUCATION (INCLUDING POSTDOC)

2005-2007	Postdoc Fellow, Harvard University; School of Engineering & Applied Sciences
1999-2005	Ph.D., Atmospheric Science, University of Alabama in Huntsville
1996-1999	M. S., Institute of Atmospheric Physics, Chinese Academy of Sciences
1992-1996	B. S., Nanjing Institute of Meteorology

EMPLOYMENT/WORK EXPERIENCE

8/2016-present	*Professor*, Dept. of Chemical and Biochemical Engineering, University of Iowa (tenure home)
8/2016-present	*Professor*, University of Iowa's Informatics Initiative (Geoinformatics track)
8/2017-present	*Professor*, Dept. of Civil and Environmental Engineering, University of Iowa (secondary faculty)
1/2018-present	*Professor*, Dept. of Physics, University of Iowa (secondary faculty)
8/2015- 8/2016	*Susan J. Rosowski Associate Professor*, University of Nebraska-Lincoln
4/2015-8/2015	*Visiting faculty*, Lab for Atmospheric Chemistry Observations & Modeling, National Center for Atmospheric Research (NCAR).
8/2013-8/2016	*Associate Professor*, Department of Earth & Atmospheric Sciences, University of Nebraska-Lincoln.
8/2007-7/2013	*Assistant Professor*, Department of Earth & Atmospheric Sciences, University of Nebraska-Lincoln.
6/2010-7/2010	*Visiting faculty*, NOAA Joint Center for Satellite Data Assimilation
4/2009-8/2009	*Visiting faculty*, Climate and Global Dynamics Division, National Center for Atmospheric Research (NCAR).
1/2008-8/2008	*Visiting Research Scientist*, Goddard Earth Science and Technology Center (GEST), University of Maryland - Baltimore County (UMBC). Work at Lab for Atmospheres (613.2), NASA Goddard Space Flight Center.
2005-2007	*NOAA Climate and Global Change Postdoctoral Fellow*, UCAR Visiting Scientist Program. Work at Harvard University.
1999-2005	Graduate Research Assistant, Department of Atmospheric Sciences, University of Alabama in Huntsville.

RESEARCH INTERESTS AND APPROACHES

Interest:	Interaction between atmospheric composition and climate change. Impacts of aerosols on air quality, weather, and climate; Interdisciplinary research related to cloud and trace gases, air quality and public health, irrigation, land use, fire, agriculture and climate change, renewable (solar and wind) energy, education in Earth Science, as well as big data research in the domain of scientific data visualization and environmental impact on ecosystem in social media.

Approaches: Remote sensing from different (ground, sub-orbital, and orbital) platforms, meteorology-chemistry coupled modeling, data assimilation, inverse modeling, and the integration of these elements; open mind to learn sciences from other disciplines and work with colleagues.

HONORS AND AWARDS

- NASA Earth Science senior review panel member, 2017.
- Science team member for various NASA satellite missions including Glory (2010-2013), Suomi-NPP (since 2011), TEMPO mission (since 2012), Aura mission (2014), DSCOVR mission (since 2014), CLARREO mission (since 2014), and MAIA (since 2016).
- Alan Berman Research Publication Award (for a co-authored paper), Naval Research Lab., 2014.
- J. B. Hoffman Faculty of Excellence award, Dept. of Earth & Atmospheric Sciences, UNL, 2013.
- 2014 NASA Group Achievement Award – Suomi-NPP "for extraordinary dedication, skill, teamwork, and perseverance in developing and delivering the Suomi NPP Mission for the Nation.".
- 2013 NASA Group Achievement Award –TEMPO "for success in capturing a major competitively awarded Earth Science Venture Class mission through outstanding professionalism and technical excellence."
- "Academic Star" award for "taking the art of mentoring to new heights" and "bring extraordinary collegiality and significant research funding", College of Arts and Sciences, UNL, 2009.
- NOAA Climate and Global Change Postdoctoral Fellowship, 2005.
- NASA Earth System Science Graduate Student Fellowship, 2003.

GRANTS

Since 2005, J. Wang's group has secured ~ $10M research grants from various federal agencies such as NASA, NOAA, NSF, USDA, and ONR.

TEACHING IN UNIV. OF NEBRASKA - LINCOLN

Undergraduate only:	Weather & Climate
Graduate/undergraduate:	Physical Meteorology, Statistical Analysis of Atmospheric Data, Air Pollution, Satellite Remote Sensing of Atmosphere,
Graduate only:	Advanced Satellite Remote Sensing, Atmospheric Radiative Transfer

TEACHING IN UNIV. OF IOWA

Undergraduate only:	Fundamentals of Engineering III: Thermodynamics
Graduate only:	Satellite Image Processing & Remote Sensing of Atmosphere Physical Meteorology and Radiative Transfer

SUPERVISION OF GRADUATE STUDENTS, POSTDOCS & RESEARCH SCIENTISTS

Current Staff Scientist	Xiaoguang Xu, Cui Ge
Current Postdoc:	Lorena Garcia, Huaxing Zhan
Current Ph.D.:	Yi Wang, Meng Zhou, Sepehr Roudini
Current M.S.	Elizabeth Lennartson
Past Postdoc:	Sunwook Park (Jan. 2011 – Aug. 2012), Feng Zhang (Aug. 2013 – Dec. 2013), Dong Han (May 2014 – May 2015), Shouguo Ding (2013-2015), Xiaoguang Xu (2015-2016), Cui Ge (2008-2016), Weizheng Hou (2014-2016)
MS completed:	Amy Gehring, Zhifeng Yang, Jacob Anderson, Phil Mykleby (co-advising with John Lanterns), Eric Holt, David Peterson (2010), Thomas Polivka, Clinton Aegerter, Chase Calkins, Yun Yue
Ph.D. completed:	David Peterson (2012), Xiaoguang Xu (2015)

UNDERGRADUTE RESEARCH ASSITANT SUPERVISION (IN UNL)

Nathaniel R. Le Sage,	Oct. 2017 - present

UNDERGRADUTE RESEARCH ASSITANT SUPERVISION (IN UNL)

Rachel Phinney	Oct 2014-Aug 2016
Haylie Mikulak	Oct 2014-May 2015
Clinton Aegerter	Aug. 2013 – July 2014
Francis Wiles	Jan. 2013 – May 2013, JPL internship in summer 2013
Levi Boggs	Jan. 2013 – May 2013
Megan Vokal	Aug. 2009 – May 2013
Carly Baumann	May 2012 – May 2013, JPL internship in summer 2012
Laura Judd	Aug. 2011 – May 2012, NASA Student Airborne Research Program (SARP) in summer 2012
Samantha Strong Henninger	Aug. 2011 – May 2012
Collin Holmquist	Aug. 2011 – May 2012, JPL internship in summer 2011, and UNL undergraduate honor program
Larry Selk	Jan. 2010 – May 2010
Amy Gehring	Aug. 2009 – May 2010, NASA GSFC summer internship 2009
Nicole Pothier	Aug. 2009 – May 2010, NASA LARC summer internship 2009
Mellisa Hoffmann	Aug. 2009 – May 2010
Jacob Anderson	Aug. 2009 – Dec. 2009
Jacob Worley	Aug. 2009 – Oct. 2009
Cathy May	Sep. 2008 – May 2010, NASA GSFC internship in 2010.

PROFESSIONAL ACTIVITIES AND SERVICES

Session Chairs/Conveners: AMS 2015- 2017, AGU Fall 2005, 2009, 2011, and 2014-2016, Goldschmidt 2014, NCAR ECSA Junior Faculty Forum on Future Scientific Directions 2010, EastFIRE conference 2010.

Proposal panel reviewer: NOAA, NASA, and DOE (in average 2.5 times per year since 2008). NASA Senior Review for Earth Science Division (2017).

Proposal non-panel reviewer: NSF, NOAA, NASA, DoD (Navy and Army), UK Natural Environment Research Council (2011), Office for Space Technology and Industry of Singapore (2013), The Netherlands Organization for Scientific Research (2010), Swiss National Science Foundation (2016).

Committees: AMS Atmospheric Chemistry Committee (2014-), Hyperspectral Imaging and Sounding of the Environment (HISE) Committee for the Optical Society of America (since 2014), Member of Harvard GEO-Chem model steering committee (2012-),

Leaderships: Co-lead for NASA GEO-CAPE aerosol working group (2012-), Atmospheric Environment (journal) editorial advisory board, GEOS-Chem steering committee (2012-).

Editorships: New Direction section editor for Atmospheric Environment (since 2013), Guest editor for *Remote Sensing* (special issue for remote sensing of air pollution, 2016-current).

Memberships: American Geophysical Union and American Meteorological Society since 1999.

External Examiner: for a Ph.D. student's dissertation and oral defense, The Hong-Kong Polytechnic University, 2017.

Frequent (30+/yr since 2005) reviewer: Atmospheric Measurements Technique, Journal of Quantitative Spectroscopy & Radiative Transfer, Journal of Atmospheric Science, Journal of Geophysical Research, Geophysical Research Letter, Atmospheric Research, Atmospheric Environment, Atmospheric

Physics and Chemistry, Quarterly Journal of Royal Meteorological Society, Annales Geophysicae, Remote Sensing Environment, Tellus, Journal of Selected Topics in Earth Observations and Remote Sensing, Applied Optics, Advances in Atmospheric Sciences, Remote Sensing, Aerosol Science and Technology, Transactions on Geoscience and Remote Sensing, Environmental Science & Technology, Frontiers of Earth Science, Total Environment, Proceedings of the National Academy of Sciences, Nature Geosciences.

UNIVERSITY/COLLEGE SERVICES

Committees at UIowa:	UIowa HPC Policy Committee (since 2016), UIowa Informatics Showcase Conference (2017) Organization Committee, Review Committee for Chemical and Biochemical Engineering DEO (Department Executive Officer)
Committees at UNL:	UNL Parking Appeal Committee (2012-2016), the advisory board for UNL Super Computing Facility (2010-2016), Department Graduate Committee (2013-2015) and Information Committee (2009-), Department Salary Advisory Committee (2010), Department faculty search committee (2008).
2013-2016 in UNL	Ad-hoc assistant/helper for UNL's Office for Research and Development (ORED) under UNL's vice chancellor for research, Dr. Prem Paul. Tasks include: (1) to provide ideas for strategic planning in Climate and agriculture research, (2) to strengthen research partnership with NASA, (3) to provide expertise and ideas for large proposal writing and coordination, and (4) to help organize research fairs (such as inviting speakers, etc).
July-Sep. 2014, UNL	One of three organizers for 3-day "Environmental Characterization" workshop sponsored by UNL's Office for Research and Development (ORED) and School of Natural Resources.
2013-2016 UNL	PI for UNL ORED's Initiative for Integrated Earth Observation and Modeling, serving as a coordinator and organizer of a group of ~15 faculty from Departments of Earth and Atmospheric Sciences, Department of Computer Science and Engineering, School of Natural Resources, and Department of Agronomy and Horticulture.

PRESENTATIONS/MEETING ABSTRACTS

Invited talks: International Workshop on "Advancement of polarimetric observations: calibration and improved aerosol retrievals" (APOLO2017), University of Michigan, 2017, National University of Singapore 2017, WMO Global Atmosphere Watch Program 2017, National University of Seoul 2017, AMS 2017, ECMWF/Univ. of Reading 2016, Yonsei University 2016, Optical Society of America 2016, NCAR/Radiation 2016, NCAR/ASP 2016, NCAR 2015, Univ. of Alibaba – Huntsville 2015, Univ. of Iowa 2015, American University 2015, AMS 2013, AGU 2012, Nebraska Department of Environmental Quality 2012, AGU 2010, NASA GSFC Atmosphere Lab 2010, NCAR 2010, Atmospheric Chemistry Society – Midwest region 2008, Amazon Aerosol Workshop 2008, NOAA ARL 2007, University of Maryland – College Park 2007, University of Minnesota 2007, NASA GSFC AEROCENTER 2006, GSFC GMAO 2006, Texas A&M 2006, Saint Louis University 2006, NCAR workshop on remote sensing of air quality 2006, Harvard 2005, Institute of Atmospheric Physics 2005.

Other presentations: ~200 poster and talks presented in venues such as AGU, EGU, AMS, AAAR, IGAC, Electromagnetic and Light Scattering conference, Gordon conference, International Symposium for Remote Sensing of the Environment, science team meetings for SNPP, Aura, TEMPO, GEO-CAPE, and NASA's Interdisciplinary Science, NOAA's Air Quality team meeting, NASA's A-train meeting, Nebraska Academy of Sciences, etc.

PEER-REVIEWED PUBLICATIONS (* graduate/postdoc in J. Wang's group)

1. Wang, Y., Y. Xie, W. Dong, Y. Ming, **J. Wang**, and L. Shen, Adverse effects of increasing drought on air quality via natural processes, *Atmospheric Chemistry and Physics*, 17, 12827–12843, 2017. https://doi.org/10.5194/acp-17-12827-2017.
2. Fu, D., X. Xia, M. Duan, X. Zhang, X. Li, and **J. Wang**, Mapping nighttime $PM_{2.5}$ from VIIRS DNB using a linear mixed effects model, *Atmospheric Environment*, submitted, 2017.
3. Xu, X.*, **J. Wang**, Y. Wang*, J. Zeng, O. Torres, Y. Yang, A. Marshak, J. Reid, and S. Miller, Passive remote sensing of altitude and optical depth of dust plumes using the oxygen A and B bands: First results from EPIC/DSCOVR at Lagrange-1 point, *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL073939, 7544-7554, 2017.
4. Tao, M., Z. Wang, J. Tao, L. Chen, **J. Wang**, C. Hou, L. Wang, X. Xu*, and H. Zhu, How aerosol properties affect the temporal variation of MODIS AOD bias in eastern China?, *Remote Sensing*, 800, doi:10.3390/rs9080800, 2017.
5. Tao, M., L. Chen, Z. Wang, **J. Wang**, H. Zheng, W. Wang, J. Tao, X. Xu*, H. Zhu, and C. Hou, Evaluation of MODIS Deep Blue aerosol algorithm in desert region of East Asia: ground validation and inter-comparison, *J. Geophys. Res.*, 122, 10,357–10,368, 2017. https://doi.org/10.1002/2017JD026976.
6. Hou, W., Z. Li, **J. Wang**, X. Xu*, P. Goloub, and L. Qie, Improving remote sensing of aerosol microphysical properties by near-infrared polarimetric measurements over vegetated land: Information content analysis, *J. Geophys. Res.*, 2017, in review.
7. Sharma, A.*, **J. Wang**, and E. M. Lennartson*, Inter-comparison of MODIS and VIIRS fre products in Khanty-Mansiysk Russia: implications for characterizing gas flaring from space, *Atmosphere*, 8, 95, doi:10.3390/atmos8060095, 2017.
8. Oozeer, M. Y., A. Chan**, J. Wang**, J. S. Reid, S. V. Salinas, M. C. G. Ooi, K. I. Morris, and M. J. Ashfold, The uncharacteristic occurrence of the June 2013 biomass-burning haze event in Southeast Asia: Combined effect of the MJO and tropical cyclone activity, *J. Geophys. Res.- Atmos.*, submitted, 2017.
9. Yue, Y., J. Wang, C. Ichoku, L. Ellison, and Q. Hu, Mitigating satellite-based fire sampling limitations in deriving biomass burning emission rates: Application to WRF-Chem model over the Northern Sub-saharan African Region, *J. Geophys. Res.- Atmos.*, submitted, 2017.
10. Wang, Y.*, **J. Wang**, R. Levy, X. Xu, J. Reid, MODIS retrieval of aerosol optical depth over turbid coastal water, *Remote Sensing*, 9, 595, 2017.
11. Zhu, J., X. Xia**, J. Wang**, H. Chen, J. Zhang, X. Xu, Robert Levy, M. Oo, R. Holz, M. Ayoub, Evaluation of aerosol optical depth and aerosol models from VIIRS retrieval algorithms over North China Plain, *Remote Sensing*, 9, 432, doi:10.3390/rs9050432, 2017.
12. Xu, X.*, **J. Wang**, Y. Wang*, D. K. Henze, L. Zhang, G. A. Grell, B. A. Wielicki, Sense size-dependent dust loading and emission from space using reflected solar and infrared spectral measurements: an observation system simulation experiment, *J. Geophys. Res.-Atmos.*, 122, 8233-8254, doi: 10.1002/2017JD026677, 2017.
13. Ge, C.*, J. Wang, J. S. Reid, D. Posselt, P. Lynch, E. Hyer, Mesoscale modeling of smoke transport from equatorial Southeast Asian Maritime Continent to the Philippines: First comparison of ensemble analysis with in situ observations, *J. Geophys. Res.- Atmos.*, 122, 5380–5398, 2017.
14. Chen, X.*, J. Wang, Y. Liu, X. Xu, Z. Cai, D. Yang, C-X. Yan, Angular dependence of aerosol information content in CAPI/TanSat observation over land: effect of polarization and synergy with A-train satellites, *Remote Sensing of Environment*, 196, 163–177, 2017.
15. Qu, Z., D. K. Henze, S. L. Capps, Y. Wang*, X. Xu*, **J. Wang**, Monthly top-down NOx emissions for China (2005-2012): a hybrid inversion method and trend analysis, *J. Geophys. Res.- Atmos.,* 122, 4600–4625, 2017.
16. Zhu, J.*, X. Xia, **J. Wang**, C. Wiedinmyer, J. A. Fisher, C. A. Keller, Impact of Southeast Asian smoke on aerosol properties in Southwest China: first comparison of model simulations with satellite and ground observation, *J. Geophys. Res.-Atmos.*, 122, 3904–3919, 2017.
17. Argerter, C., J. Wang, C. Ge, S. Irmak, R. Oglesby, B. Wardlow, H. Yang, J. You, and M. Shulski

(2016), Mesoscale modeling of the meteorological impacts of irrigation during the 2012 central plains drought, *Journal of Applied Meteorology and Climatology*, 1259-1283*,* 56, 2017.

18. Breider, T., L. J. Mickley, D. J. Jacob, C. Ge*, **J. Wang**, M. Payer Sulprizio, B. Croft, D. A. Ridley, J. R. McConnell, S. Sharma, L. Husain, V. A. Dutkiewicz, K. Eleftheriadis, H. Skov, P. K. Hopke, Multidecadal trends in aerosol radiative forcing over the Arctic: contribution of changes in anthropogenic aerosol to Arctic warming since 1980, *J. Geophys. Res.-Atmos.*, 122, 3573–3594, 2017.
19. Hou, W.*, **J. Wang**, X. Xu*, and J. Reid, An algorithm for hyperspectral remote sensing of aerosols: 2. Information content analysis for aerosol parameters and principal components of surface spectra, *Journal of Quantitative Spectroscopy & Radiative Transfer.*, 192, 14-29, 2017.
20. Shiflett, S., L. L. Liang, S. M. Crum, G. L. Feyisa, **J. Wang**, and G. D. Jenerette, Variation in the urban vegetation, surface temperature, air temperature nexus, *Science of the Total Environment*, 579, 495-505, 2017.
21. Zoogman, P., Liu, X., and other ~30 coauthors including **J. Wang**, Tropospheric Emissions: Monitoring of Pollution (TEMPO), *Journal of Quantitative Spectroscopy & Radiative Transfer.*, 186, 17-39, 2017.
22. Calkins, C., C. Ge, **J. Wang**, M. Anderson, K. Yang, Effects of meteorological conditions on sulfur dioxide air pollution in the North China Plain during winters of 2006-2015, *Atmospheric Environment*, 147, 296-309, 2016.
23. Wang, Y.*, **J. Wang**, X. Xu*, D. K. Henze, Y. Wang, Z. Qu, A new approach for monthly updates of anthropogenic sulfur dioxide emissions from space: implications for air quality forecasts, *Geophys. Res. Lett.*, 43, 9931–9938, 2016.
24. Ichoku, C., L. Ellison, K. E. Willmot, T. Matsui, A. Dezfuli, C. Gatebe, **J. Wang**, E. Wilcox, J. Lee, J. Adegoke, C. Okonkwo, J. Bolten, F. Policelli, S. Habib, Biomass burning, land-cover change, and the hydrological cycle in Northern sub-Saharan Africa, *Environmental Research Letter.*, 11, 095005, doi:10.1088/1748-9326/11/9/09500, 2016.
25. Tao, M., L. Chen, R. Li, L. Wang, **J. Wang**, Z. Wang, G. Tang, and J. Tao, Spatial oscillation of the particle pollution in eastern China during winter: Implications for regional air quality and climate, *Atmospheric Environment*, 144, 100-110, 2016.
26. **Wang J.**, A. Kessner*, C. Aegerter*, A. Sharma*, L. Judd*, B. Wardlow, J. You, M. Shulski, S. Irmak, A. Kilic, and J. Zeng, A multi-sensor view of the 2012 Central Plains drought from space. *Front. Environ. Sci.*, 4:45, doi: 10.3389/fenvs.2016.00045, 2016.
27. Tao, M., L. Chen, Z. Wang, **J. Wang**, J. Tao, and X. Wang, Did the widespread haze pollution over China increase during the last decade? A satellite view from space, *Envion. Res. Lett.*, 11, 054019, 2016.
28. Yu, L., F. Zhu, H. Yu, **J. Wang**, and K. S. Kuo, Feature extraction and tracking for large-scale geospatial data, *2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, Beijing, pp. 1504-1507. doi: 10.1109/IGARSS.2016.7729384, 2016.
29. Ge, C.*, **J. Wang**, S. Carn, K. Yang, P. Ginoux, and N. Krotkov, OMI-based update of global volcanic sulfur emissions and sulfate direct radiative forcing during 2005-2012, *J. Geophys. Res.*, 121, 3446–3464, doi:10.1002/2015JD023134, 2016.
30. Polivka, T.*, **J. Wang**, L. Ellison, E. Hyer, and C. Ichoku, Improving Nocturnal Fire Detection with the VIIRS Day-Night Band, *IEEE Transactions on Geoscience & Remote Sensing*, 5503 - 5519, 2016.
31. Hou, W.*, **J. Wang**, X. Xu*, J. Reid, D. Han*, An algorithm for hyperspectral remote sensing of aerosols 1. Development of theoretical framework, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 178, 400-415, doi:10.1016/j.jqsrt.2016.01.019, 2016.
32. Ding, S., **J. Wang**, and X. Xu, Polarimetric remote sensing in O_2 A and B bands: Sensitivity study and information content analysis for vertical profile of aerosols, *Atmospheric Measurement Techniques*, 9, 2077-2092, doi:10.5194/amt-9-2077-2016, 2016.
33. Daggumati, S., I. Soares, J. Wu, D. Cao, H. Yu, and **J. Wang**, Tweether: A Visualization Tool Displaying Correlation of Weather to Tweets, *Proceedings of IS&T Conference on Visualization and Data*

Analysis (VDA), *Electronic Imaging*, DOI:10.2352/ISSN.2470-1173.2016.1.VDA-497, February, 2016[1].

34. Campbell, J. R., C. Ge*, **J. Wang**, E. J. Welton, A. Bucholtz, E. J. Hyer, E. A. Reid, B. N. Chew, S.-C. Liew, S. V. Salinas, S. Lolli, K. C. Kaku, P. Lynch, M. Mahamud, M. Mohamad, and B. N. Holben, 2016: Applying advanced ground-based remote sensing in the Southeast Asian Maritime Continent to characterize regional proficiencies in smoke transport modeling.*J. Appl. Meteorol. Clim.*, 55, 3-22, DOI:10.1175/JAMC-D-15-0083.1.
35. **Wang, J**., Clint Aegerter*, Xiaoguang Xu*, and J. J. Szykman, Potential application of VIIRS Day/Night Band for monitoring nighttime surface PM2.5 air quality from space, *Atmospheric Environment*, 124, 55–63, doi:10.1016/j.atmosenv.2015.11.013, 2016.
36. Qu, W., **J. Wang**, X. Zhang, L. Sheng, and W. Wang, Opposite seasonality of the aerosol optical depth and the surface particulate matter concentration over the North China Plain, *Atmos. Environ.*, 127, 90-99, 2016.
37. Zhu, J., X. Xia, H. Che, **J. Wang**, J. Zhang, Y. Duan, Study of aerosol optical properties at Kunming in southwest China and long-range transport of biomass burning aerosols from North Burma, *Atmospheric Research*, 169, 237-247, doi:10.1016/j.atmosres.2015.10.012, 2016.
38. Xu, X* and **J. Wang** , Retrieval of aerosol microphysical properties from AERONET photo-polarimetric measurements: 1. Information content analysis, *J. Geophys. Res.*, 120, 7059-7078, doi:10.1002/2015JD023108, 2015.
39. Xu, X.*, **J. Wang** , J. Zeng, R. Spurr, X. Liu, O. Dubovik, L. Li, Z. Li, M. Mishchenko, A. Sinyuk, and B. Holben, Retrieval of aerosol microphysical properties from AERONET photo-polarimetric measurements: 2. A new research algorithm and case demonstration, *J. Geophys. Res.*, 120, 7079-7098, doi:10.1002/2015JD023113, 2015.
40. Oikawa, P.Y., C. Ge*, **J. Wang**, J.E. Eberwein, L. Liang, L.A. Allsman, D.A. Grantz, G.D. Jenerette, High soil nitrogen oxide emissions lower air quality in high temperature agroecosystem, *Nature Communication*, 6, 8753, doi:10.1038/ncomms9753, 2015.
41. Qu, W.J., **J. Wang**, X. Zhang, Z. Yang, and S. Gao, Effect of cold waves on winter visibility over eastern China, *J. Geophys. Res.*, 120, 2394-2406, doi:10.1002/2014JD021958, 2015.
42. Polivka, T.*, E. Hyer, **J. Wang** , and D. Peterson, First global analysis of saturation artifacts in the VIIRS infrared channels and the effects of sample aggregation, *IEEE Geoscience and Remote Sensing Letters*, 1262-1266, 2015. (journal cover article).
43. Jie, W., T. Wu, **J. Wang**, W. Li, and T. Polivka, Using a deterministic time-lagged ensemble forecast with a probabilistic threshold for improving 6-15 day summer precipitation prediction in China, *Atmospheric Research*, 156, 142-159, 2015.
44. Qu, W.J., **J. Wang**, X. Y. Zhang, D. Wang, and L. F. Sheng, Influence of relative humidity on aerosol composition: Impacts on light extinction and visibility impairment at two sites in coastal area of China, *Atmospheric Research*, 153, 500-511, 2015.
45. **Wang, J.**, X. Xu, S. Ding, J. Zeng, R. Spurr, X. Liu, K. Chance, and M. Mishchenko, A numerical testbed for remote sensing of aerosols, and its demonstration for evaluating retrieval synergy from a geostationary satellite constellation of GEO-CAPE and GOES-R. *J. Quant. Spectrosc. Radiat. Transfer*, 146, 510-528, 2014.
46. Yang, K., S. Carn, C. Ge*, **J. Wang**, and R. Dickerson, Advancing measurements of tropospheric NO2 from space: new algorithm and first global results from OMPS, *Geophysical Research Letter*, 41, 4777-4786, 2014.
47. Zhang, F.*, **J. Wang** , C. Ichoku, E. Hyer, Z. Yang*, C. Ge*, S. Su, X. Zhang, S. Kondragunta, J. Kaiser, C. Wiedinmyer, and A. da Silva, Sensitivity of mesoscale modeling of smoke direct radiative effect to the emission inventory: A case study in northern sub-Saharan African region, *Environmental Research Letter*, 9, 075002, 2014.

[1] This is peer-reviewed article published in a proceeding for a conference in the field of computer science and engineering.

48. Peterson, D., E. J. Hyer, and **J. Wang**, Quantifying the potential for high-altitude smoke injection in North American boreal forest using the standard MODIS fire products and sub-pixel-based methods, *J. Geophys. Res. Atmos.*, 119, 3401-3419, 2014.
49. Wang, Q., D. Jacob, J. R. Spackman, A. Perring, J. Schwarz , N. Moteki , E. Marais , C. Ge , **J. Wang** , S. Barrett, Global budget and radiative forcing of black carbon aerosol: constraints from pole-to-pole (HIPPO) observations across the Pacific, *J. Geophys. Res. Atmos.*, 119, 195-206, 2014.
50. Ge, C.*, **J. Wang**, and J. S. Reid, Mesoscale modeling of smoke transport over the Southeast Asian Maritime Continent: coupling of smoke direct radiative effects below and above the low-level clouds, *Atmos. Chem. Phys.*, 14, 159-174, 2014.
51. Jie, W., T. Wu, **J. Wang**, W. Li, The Improvement of 6-15 day precipitation forecasts using a time-lagged ensemble method, *Advances in Atmospheric Sciences*, 31, 293-304, 2014.
52. Yang, K., R. R. Dickerson, S. A. Carn, C. Ge*, and **J. Wang**, First observations of SO2 from the satellite Suomi NPP OMPS: Widespread air pollution events over China, *Geophys. Res. Lett.*, 40, 4957–4962, doi:10.1002/grl.50952, 2013.
53. Yang, Z.*, **J. Wang**, C. Ichoku, E. Hyer, and J. Zeng, Mesoscale modeling and satellite observation of transport and mixing of smoke and dust particles over northern sub-Saharan African region, *J. Geophys. Res. Atmos.*, 118, 12,139-12,157, 2013.
54. Meland, B. S., X. Xu*, D. K. Henze, and **J. Wang**, Assessing remote polarimetric measurements sensitivities to aerosol emissions using the GEOS-Chem adjoint model, *Atmos. Meas. Tech.*, 6, 3441-3457, 2013.
55. **Wang, J**., S. Park*, J. Zeng, K. Yang, S. Carn, N. Krotkov, and A. Omar, Modeling of 2008 Kasatochi volcanic sulfate direct radiative forcing: assimilation of OMI SO_2 plume height data and comparison with MODIS and CALIOP observations, *Atmospheric Chemistry and Physics*, 13, 1895-1912, 2013.
56. Anderson, J.C.*, **J. Wang**, J. Zeng, G. Leptoukh, M. Petrenko, C. Ichoku, C. Hu, Long-term statistical assessment of Aqua-MODIS aerosol optical depth over coastal regions: bias characteristics and uncertainty sources, *Tellus*, 65, 20805, 2013.
57. van Donkelaar, A., R. V. Martin, R. J. D. Spurr, E. Drury, L. A. Remer, R. C. Levy, and **J. Wang**, Optimal estimation for global ground-level fine particulate matter concentrations, *J. Geophys. Res. Atmos.*, 118, 5621–5636, 2013.
58. Kessner, A.*, J. Wang, R. Levy, and P. Colarco, Remote sensing of surface visibility on the U.S. east coast, *Atmospheric Environment*, 81, 136-147, 2013.
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