

## ***CV for Liming Zhou***

### ***Short Summary***

I am a Professor with the Department of Atmospheric and Environmental Sciences (DAES) at SUNY Albany. Broadly trained as a physical geographer and a meteorologist, I have a strong interest in interdisciplinary research related to remote sensing, climate change, vegetation dynamics, land-human-climate/atmosphere interactions, and land surface and climate modeling. I have authored and coauthored 4 book chapters including the IPCC AR4 Report and 121 peer-reviewed papers in journals including *Nature*. My peer-refereed publications since 2000 have a total citation of 22,513 times (h-index: 56) according to *Google Scholar* and 12,652 times (h-index: 48) according to *Web of Science* as of October 8, 2024. I have been active in professional service activities as a NSF Program Director (2008-2011) and as a reviewer for top-notch geophysical journals including *Nature* and for NSF and NASA proposals. Before coming to US, I was a weather forecaster at National Meteorological Center in China.

The overarching objective of my research is to advance our understanding of land-human-atmosphere/climate interactions through a synthetic analysis of meteorological observations and remotely sensed data with Earth system modeling.

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Date: October 8, 2024

### EDUCATION

- Ph.D., Geography, Boston University, USA, 2002  
*Warming enhanced plant growth in the north since the 1980s: A greener greenhouse*  
Supervisor: Prof. Ranga B. Myneni, Boston University, USA
- M.Sc., Meteorology, Nanjing Institute of Meteorology, China
- B.Sc., Meteorology, Nanjing Institute of Meteorology, China

### EDUCATIONAL EMPLOYMENT

- Professor, SUNY Albany, USA, 2019-present
- Associate Professor (tenured), SUNY Albany, USA, 2014
- Associate Professor, SUNY Albany, USA, 2012-2018
- Research Associate Professor, SUNY Albany, USA, 2011-2012
- Senior research scientist, Georgia Institute of Technology, USA, 2007-2008
- Research scientist II, Georgia Institute of Technology, USA, 2004-2007
- Postdoctoral fellow, Georgia Institute of Technology, USA, 2002-2004
- Research assistant, Boston University, USA, 1998-2001

### ADDITIONAL EMPLOYMENT

- Program Director/Associate Program Director in Climate and Large-Scale Dynamics, National Science Foundation, USA, 2008-2011
- Physical scientist, IMSG at NOAA/NESDIS/STAR, USA, 2007-2007
- Weather forecaster, National Meteorological Center (NMC), China, 1994-1998
- Research assistant, Open Lab. for Weather Forecast, NMC, China, 1994-1998

## RESEARCH INTERESTS

- Climate change and variability over subtropical deserts
- Climate change and its impact on tropical rainforests
- Renewable wind energy and its impacts on weather and climate
- Land-human-atmosphere/climate interactions
- Remote sensing and its applications in land surface and climate modeling
- Remote sensing of vegetation dynamics and vegetation-climate interactions

## PUBLICATIONS

### Book Chapters

- **Zhou, L.**, Baidya Roy, S., Xia, G., Chapter 00920. Weather, climatic and ecological impacts of onshore wind farms in *Comprehensive Renewable Energy, Second Edition*, edited by Letcher, L., Elsevier, 2020 (ISBN: 9780124095489). doi: <https://doi.org/10.1016/B978-0-12-819727-1.00018-2>, [PDF](#).
- A contributing author, Chapter 7: Couplings Between Changes in the Climate System and Biogeochemistry in *The IPCC Fourth Assessment Report: Climate Change 2007: The Physical Science Basis*, 2007 (SBN 978-0-521-88009-1), [PDF](#).
- **Zhou, L.**, Kaufmann, R.K., Tucker, C.J., Myneni, R.B., The Green Wave in *Our Changing Planet: The View from Space*, edited by King, M., Parkinson, C., Partington, K.C., and Williams, R.G., Cambridge University Press, 2007 (ISBN-13: 9780521828703), [BookLink](#).
- Myneni, R.B. and **Zhou, L.**, Vegetation activity in the northerly latitudes during the past two decades in *Topics in ecology: Structure and function in plants and ecosystems*. edited by J. Bogaert, G. Deckmyn and I. Nijs, University of Antwerp Press, 2000 (ISBN 90-5728-022-1).

### Peer-refereed Publications (\*graduate student and \*\*postdoc as lead author)

PDF versions are located at [http://www.atmos.albany.edu/facstaff/zhou/pdf/pdf\\_papers/](http://www.atmos.albany.edu/facstaff/zhou/pdf/pdf_papers/)

### Total Citations (only for peer-reviewed publications in English since 2000)

1. **Web of Science: 12,652 times (h-index: 48)**  
(<https://www.webofscience.com/wos/author/record/354231>)
2. **Google Scholar: 22,513 times (h-index: 56)**  
(<http://scholar.google.com/citations?user=E8dU9A4AAAAJ&hl=en>)

### University at Albany (2011-present)

121. Wu, D., Grodsky, S.M., Xu, W., Liu, N., Almeida, R.M., **Zhou, L.**, Miller, L.M., Baidya Roy, S., Xia, G., Agrawal, A.A., Houlton, B.Z., Flecker, A.S., Xu, X., Observed impacts of large wind farms on grassland carbon cycling, *Science Bulletin*, 68 (23), 2889-2892. <https://doi.org/10.1016/j.scib.2023.10.016>, 2023, [PDF](#).
120. Sussman, H.S., Dai, A., Raghavendra, A., **Zhou, L.**, An evaluation of WRF urban canopy models over Bengaluru, India. *Modeling Earth Systems and Environment*, <https://doi.org/10.1007/s40808-023-01858-4>, 2023, [PDF](#).
119. **Zhou, L.**, Hua, W., Nicholson, S., Clark, J.P., Interannual teleconnections in the Sahara temperatures associated with the North Atlantic Oscillation (NAO) during boreal winter, *Climate Dynamics*, <https://doi.org/10.1007/s00382-023-06962-w>, 2023, [PDF](#).
118. \*Alber, K., **Zhou, L.**, Roundy, P., and Solimine, S., Influence of the Madden-Julian Oscillation on the diurnal cycles of convection and precipitation over the Congo Basin, *Atmospheric Research*, 294, 106967, <https://doi.org/10.1016/j.atmosres.2023.106967>. 2023, [PDF](#).
117. Hua, W., **Zhou, L.**, Dai, A., Chen, H., Liu, Y., Important non-local effects of deforestation on cloud cover changes in CMIP6 models, *Environ. Res. Lett.*, 18 (2023) 094047, <https://doi.org/10.1088/1748-9326/acf232>, 2023, [PDF](#).
116. Liu, S., Hua, W., **Zhou, L.**, Chen, H., Yu, M., Li, X., Cui, Y., Local and non-local biophysical impacts of deforestation on global temperature during boreal summer: CMIP6-LUMIP multimodel analysis, *JGR-Atmosphere*, 128 (11), e2022JD038229. <https://doi.org/10.1029/2022JD038229>, 2023, [PDF](#).
115. Zhang, S., **Zhou, L.**, Zhang, L., Yang, Y., Yang, D., Wei, Z., Zhou, S., Yang, D., Yang, X., Wu, X., Zhang, Y., Li, X., and Dai, Y., Reconcile disagreement on global river flood change in a warming climate. *Nature Climate Change* **12**, 1160–1167. <https://doi.org/10.1038/s41558-022-01539-7>, 2022, [PDF](#).
114. Zhao, G., Li, Y., **Zhou, L.**, Gao, H., Evaporative water loss of 1.42 million global lakes. NCOMMS-21-24284, *Nat Commun* **13**, 3686 (2022). <https://doi.org/10.1038/s41467-022-31125-6>, 2022, [PDF](#).
113. \*Zhuo, L., **Zhou, L.**, Moisture transport and water vapor budget over the Sahara Desert. *International Journal of Climatology*. JOC-21-1100, DOI: 10.1002/joc.7614, 2022, [PDF](#).
112. \*Solimine, S., **Zhou, L.**, Raghavendra, A., and Cai, Y., Relationships between severe convection, lightning, and rainfall over the Congo Basin using TRMM data. *Atmospheric Research*, D-21-01389, <https://doi.org/10.1016/j.atmosres.2022.106164>, 2022, [PDF](#).
111. Nicholson, S.E., Klotter, D.A., **Zhou, L.**, and Hua, W., Recent rainfall conditions in the Congo Basin. *Environ. Res. Lett.*, ERL-112358, <https://doi.org/10.1088/1748-9326/ac61c4>, 2022, [PDF](#).
110. \*Raghavendra, A., Xia, G., **Zhou, L.**, Jiang, Y., Orographic enhancement of rainfall over the Congo Basin. *Atmospheric Science Letters*. ASL-21-059, DOI: 10.1002/asl.1079, 2022, [PDF](#).
109. Costa, D.F., Gomes, H.B., Silva, M.C.L., **Zhou, L.**, The most extreme heat waves in Amazonia happened under extreme dryness. *Clim Dyn* (2022), 1-15. <https://doi.org/10.1007/s00382-021-06134-8>, 2022, [PDF](#).
108. Hua, W., Xuan, D., Liu, Q., **Zhou, L.**, Chen, H., & Sun, S., High-resolution WRF simulation of extreme heat events in eastern China: Large sensitivity to land surface schemes, *Frontiers in Earth Science*, 9, 1050, <https://doi.org/10.3389/feart.2021.770826>, 2021, [PDF](#).
107. Chao, L., Li, Q., Dong, W., Yang, Y., Guo, Z., Huang, B., **Zhou, L.**, Jiang, Z., Zhai, P., Jones, P., Vegetation greening offsets urbanization-induced fast warming in Guangdong, Hong Kong,

- and Macao region (GHMR). *Geophys. Res. Lett.*, 48, e2021GL095217. <https://doi.org/10.1029/2021GL095217>, 2021, [PDF](#).
106. \*Alber, K., **Zhou, L.**, \*Raghavendra, A., A shift in the diurnal timing and intensity of deep convection over the Congo Basin during the past 40 years. *Atmospheric Research*, 264, 105869. DOI:10.1016/j.atmosres.2021.105869, 2021, [PDF](#).
105. Hua, W., Qin, M., Dai, A., **Zhou, L.**, Chen, H., & Zhang, W., Reconciling human and natural drivers of the tripole pattern of multidecadal summer temperature variations over Eurasia. *Geophys. Res. Lett.*, 48, e2021GL093971. <https://doi.org/10.1029/2021GL093971>, 2021, [PDF](#).
104. \*Jiang, Y., **Zhou, L.**, Roundy, P. E., Hua, W., & Raghavendra, A., Increasing influence of Indian Ocean Dipole on precipitation over Central Equatorial Africa, *Geophys. Res. Lett.*, 48, e2020GL092370. <https://doi.org/10.1029/2020GL092370>, 2021, [PDF](#).
103. **Zhou, L.**, Tian, Y., Wei, N., Ho, S-P., Li, J., Rising planetary boundary layer height over the Sahara Desert and Arabian Peninsula in a warming climate, *J. Climate*, 34(10), 4043-4068, <https://journals.ametsoc.org/view/journals/clim/34/10/JCLI-D-20-0645.1.xml>, 2021, [PDF](#).
102. **Zhou, L.**, Diurnal asymmetry of desert amplification and its possible connections to planetary boundary layer height: a case study for the Arabian Peninsula, *Climate Dynamics*, 56, 3131–3156 (2021). <https://doi.org/10.1007/s00382-021-05634-x>, 2021, [PDF](#).
101. Tian, Y., LaFarr, M., Yun, J., Civerolo, K., Hao, W., Zalewsky, E., **Zhou, L.**, Analyzing meteorological and chemical conditions for two high ozone events over the New York City and Long Island Region, *IGARSS 2020 - 2020 IEEE International Geoscience and Remote Sensing Symposium*, 2020, pp. 5537-5540, doi: 10.1109/IGARSS39084.2020.9324470, 2020, [PDF](#).
100. \*Alber, K., \*Raghavendra, A., **Zhou, L.**, Jiang, Y., Sussman, H.S., Solimine, S.L., Analyzing intensifying thunderstorms over the Congo Basin using the Gálvez-Davison index from 1983–2018, *Climate Dynamics*. doi:10.1007/s00382-020-05513-x, 2020, [PDF](#).
99. \*Zhang, W., Chen, H., **Zhou, L.**, Zhou, B., Zhang, J., and Wei, J., Effects of nonuniform land surface warming on summer anomalous extratropical cyclone activity and East Asian summer monsoon: Numerical experiments with a regional climate model. *J. Climate*, doi: <https://doi.org/10.1175/JCLI-D-20-0088.1>, 2020, [PDF](#).
98. \*Jiang, Y., **Zhou, L.**, and Raghavendra, A., Observed changes in fire patterns and possible drivers over Central Africa. *Environ. Res. Lett.* 15 0940b8, doi: <https://doi.org/10.1088/1748-9326/ab9db2>, 2020, [PDF](#).
97. \*Raghavendra, A., **Zhou, L.**, Roundy, P.E., Jiang, Y., Milrad, S.M., Hua, W., and Xia, G., The MJO's impact on rainfall trends over the Congo rainforest, *Climate Dynamics*, 54, 2683–2695, <https://doi.org/10.1007/s00382-020-05133-5>, 2020, [PDF](#).
96. \*Sussman, H.S., Raghavendra, A., **Zhou, L.**, Impacts of increased urbanization on surface temperature, vegetation, and aerosols over Bengaluru, India, *Remote Sensing Applications: Society and Environment* 16 (2019) 100261, <https://doi.org/10.1016/j.rsase.2019.100261>, 2019, [PDF](#).
95. \*Jiang, Y., **Zhou, L.**, Tucker, C.J., Raghavendra, A., Hua, W., and Liu, Y.Y., and Joiner, J., Widespread Increase of boreal summer dry season length over the Congo rainforest, *Nature Climate Change*, 9, 617–622, <https://doi.org/10.1038/s41558-019-0512-y>, 2019, [PDF](#).
94. \*Xia, G., **Zhou, L.**, Minder, J.R., Fovell, R.G., and Jimenez, P.A., Simulating impacts of real-world wind farms on land surface temperature using the WRF model: Physical mechanisms, *Climate Dynamics*, 53, 3-4, 1723–1739, <https://doi.org/10.1007/s00382-019-04725-0>, 2019, [PDF](#).

93. Nicholson, S.E., Klotter, D., **Zhou, L.**, and Hua, W., Validation of satellite precipitation estimates over the Congo Basin, *J. Hydrometeor.*, 20, 631-656, DOI: 10.1175/JHM-D-18-0118.1, 2019, [PDF](#).
92. \*Raghavendra, A., Roundy, P.E., and **Zhou, L.**, Trends in tropical wave activity from 1980s-2016. *Journal of Climate*, 32, 1661-1676, DOI: <https://doi.org/10.1175/JCLI-D-18-0225.1>, 2019, [PDF](#).
91. \*\*Hua, W., Dai, A., **Zhou, L.**, Qin, M., and Chen, H., An externally forced decadal rainfall seesaw pattern over the Sahel and southeast Amazon, *Geophys. Res. Lett.*, 46, 923-932, DOI: 10.1029/2018GL081406, 2019, [PDF](#).
90. \*\*Hua, W., **Zhou, L.**, Chen, H., Qin, M., Wei, N. and G. Xia, Assessing reanalysis data sets for understanding rainfall climatology and variability over Central Equatorial Africa, *Climate Dynamics*, 53, 651-669, DOI 10.1007/s00382-018-04604-0, 2019, [PDF](#).
89. Nicholson, S.E., Klotter, D., Dezfuli, A.K., and **Zhou, L.**, New rainfall data sets for the Congo Basin and surrounding regions, *J. Hydrometeor.*, 19, 1379-1396, <https://doi.org/10.1175/JHM-D-18-0015.1>, 2018, [PDF](#).
88. \*Raghavendra, A., **Zhou, L.**, Jiang, Y., and Hua, W., Increasing extent and intensity of thunderstorms observed over the Congo Basin from 1982 to 2016. *Atmospheric Research*, 213, 17-26, 2018, [PDF](#).
87. Li, Y., Piao, S., Li, L.Z.X., Chen, A., Wang, X., Ciais, P., Huang, L., Lian, X., Peng, S., Zeng, Z., Wang, K., and **Zhou, L.**, Divergent hydrological response to large-scale afforestation and vegetation greening in China, *Science Advances*, 4(5), eaar418, 2018, [PDF](#).
86. Ma, H., Chen, H., Gray, L., **Zhou, L.**, Li, X., Wang, R. and Zhu, S., Changing response of the North Atlantic/European winter climate to the 11 year solar cycle, *Environ. Res. Lett.*, 13(2018) 034007, doi:10.1088/1748-9326/aa9e94, 2018, [PDF](#).
85. \*\*Hua, W., **Zhou, L.**, Chen, H., Nicholson, S.E., Jiang, Y., Raghavendra, A., Understanding the central equatorial African long-term drought using AMIP-type simulations, *Climate Dynamics*, 50, 3-4, 1115-1128, doi:10.1007/s00382-017-3665-2, 2018, [PDF](#).
84. \*Xia, G., Cervarich, M.C., Baidya Roy, S., **Zhou, L.**, Minder, J.R., Jimenez, P.A., and Freeman, J.M., Simulating impacts of real-world wind farms on land surface temperature using the WRF model: Validation with observations, *Monthly Weather Review*, 145, 4813-4836, 2017, [PDF](#).
83. \*Xia, G. and **Zhou, L.**, Detecting wind farm impacts on local vegetation growth in Texas and Illinois using MODIS vegetation greenness measurements, *Remote Sens.*, 9(7), 698, doi:10.3390/rs970698, 2017, [PDF](#).
82. \*Li, J., Fan, K., and **Zhou, L.**, Satellite observations of El Nino impacts on Eurasian spring vegetation greenness during the period 1982-2015, *Remote Sens.*, 9(7), 628; doi:10.3390/rs9070628, 2017, [PDF](#).
81. Zeng, Z., Piao, S., Li, L.Z.X., **Zhou, L.**, Ciais, P., Wang, T., Li, Y., Lian, X., Wood, E.F., Friedlingstein, P., Mao, J., Estes, L.D., Myneni, R.B., Peng, S., Shi, X., Seneviratne, S.I. and Wang, Y., Climate mitigation from vegetation biophysical feedbacks during the past three decades, *Nature Climate Change*, 7, 432-436, doi:10.1038/nclimate3299, 2017, [PDF](#).
80. \*Wei, N., **Zhou, L.**, and Dai, Y., Observational evidence for desert amplification using multiple satellite datasets, *Scientific Reports*, 7, 2043, doi:10.1038/s41598-017-02064-w, 2017, [PDF](#).

79. \*\*Hua, W., Chen, H., **Zhou, L.**, Xie, Z., Li, X., Qin, M., Li, X., Ma, H., Huang, Q. and Sun, S., Observational quantification of climatic and human influences on vegetation greening in China, *Remote Sens.*, 9(5), 425; doi:10.3390/rs9050425, 2017, [PDF](#).
78. Wei, J., Jin, Q., Yang, Z-L., and **Zhou, L.**, Land-atmosphere-aerosol coupling in North China during 2000–2013, *Int. J. Climatol.*, 37, 1297-1306, DOI: 10.1002/joc.4993, 2017, [PDF](#).
77. \*Wei, N., **Zhou, L.**, and Dai, Y., Evaluation of simulated climatological diurnal temperature range in cmip5 models from the perspective of planetary boundary layer turbulent mixing, *Climate Dynamics*, 49(1), 1-22, DOI 10.1007/s00382-016-3323-0, 2017, [PDF](#).
76. \*\*Hua, W., **Zhou, L.**, Chen, H., Nicholson, S.E., Jiang, Y., Raghavendra, A., Possible causes of the central equatorial African long-term drought. *Environ. Res. Lett.*, 11(12), doi:10.1088/1748-9326/11/12/124002, 2016, [PDF](#).
75. **Zhou, L.**, Desert amplification in a warming climate. *Scientific Reports*, 6, 31065; doi: 10.1038/srep31065, 2016, [PDF](#).
74. **Zhou, L.**, Chen, H., Hua, W., Dai, Y. and Wei, N., Mechanisms for stronger warming over drier ecoregions observed since 1979, *Climate Dynamics*, 47, 2955–2974, DOI 10.1007/s00382-016-3007-9, 2016, [PDF](#).
73. \*Xia, G., **Zhou, L.**, Freedman, J.M., Baidya Roy, S., Harris, R.A., and Cervarich, M.C., A case study of effects of atmospheric boundary layer turbulence, wind speed, and stability on wind farm induced temperature, *Climate Dynamics*, 46, 2179-2196, DOI 10.1007/s00382-015-2696-9, 2016, [PDF](#).
72. Shen, M., Piao, S., Jeong, S-J., **Zhou, L.**, Zeng, Z., Ciais, P., Cheng, D., Huang, M., Jin, C-S., Li, L.Z.X., Li, Y., Myneni, R.B., Yang, K., Zhang, G., Zhang, Y., and Yao, T., Evaporative cooling over the Tibetan Plateau induced by vegetation growth, *Proc. Natl. Acad. Sci. USA*, 112(30), 9299-9304, doi/10.1073/pnas.1504418112, 2015, [PDF](#).
71. \*Slawsky, L.M., **Zhou, L.**, Baidya Roy, S., Xia, X., Vuille, M., and Harris, R.A., Observed thermal impacts of wind farms over northern Illinois, *Sensors*, 15, 14981-15005; doi:10.3390/s150714981, 2015, [PDF](#).
70. Bi, J., Knyazikhin, Y., Choi, S., Park, T., Barichivich, J., Ciais, P., Fu, R., Ganguly, S., Hall, F., Hilker, T., Huete, A., Jones, M., Kimball, J., Lyapustin, A., Møttus, M., Nemani, R., Piao, S., Poulter, B., Saleska, S., Saatchi, S., Xu, L., **Zhou, L.**, and Myneni, R., Sunlight mediated seasonality in canopy structure and photosynthetic activity of Amazonian rainforests. *Environ. Res. Lett.*, 10, doi: 10.1088/1748-9326/10/6/064014, 2015, [PDF](#).
69. **Zhou, L.**, Chen, H. and Dai, Y., Stronger warming amplification over drier ecoregions observed since 1979, *Environ. Res. Lett.*, 10(6), 64012, doi:10.1088/1748-9326/10/6/064012, 2015, [PDF](#).
68. Zeng, Z., A. Chen, P. Ciais, Y. Li, L. Z. X. Li, R. Vautard, **Zhou, L.**, H. Yang, M. Huang, and S. Piao (2015), Regional air pollution brightening reverses the greenhouse gases induced warming-elevation relationship, *Geophys. Res. Lett.*, 42, 4563-4572, doi:10.1002/2015GL064410, 2015, [PDF](#).
67. Li, Q., Yang, S., Xu, W., Wang, X.L., Jones, P., Parker, D., **Zhou, L.**, Feng, Y. and Gao, Y., China experiences the recent warming hiatus, *Geophys. Res. Lett.*, 42, 889-898, DOI: 10.1002/2014GL062773, 2015, [PDF](#).
66. Hua, W., Chen, H., Sun, S., **Zhou, L.**, Assessing climatic impacts of future land use and land cover change projected with the CanESM2 model, *Int. J. Climatol.*, 35: 3661–3675, Article first published online: 19 DEC 2014, DOI: 10.1002/joc.4240, 2015, [PDF](#).

65. \*Wei, N., Dai, Y., Zhang, M., **Zhou, L.**, Ji, D., Zhu, S., and Wang, L., Impact of precipitation-induced sensible heat on the simulation of land-surface air temperature, *J. Adv. Model. Earth Syst.*, 6, 1311-1320, doi:10.1002/2014MS000322, 2015, [PDF](#).
64. Zhao, X., Hu, H., Shen, H., Zhou, D., **Zhou, L.**, Myneni, R.B., Satellite-indicated long-term vegetation changes and their drivers on the Mongolian Plateau, *Landscape Ecology*, 30:1599-1611, 2015, [PDF](#).
63. \*Harris, R.A., **Zhou, L.**, Xia, G., Observations of wind farm impacts on nocturnal land surface temperature in Iowa, *Remote Sens.*, 6, 12234-12246, 2014, [PDF](#).
62. **Zhou, L.**, Tian, Y., Myneni, R.B., Ciais, P., Saatchi, S., Liu, Y.Y., Piao, S., Chen, H., Vermote, E.F., Song, C. and Hwang, T., Widespread decline of Congo rainforest greenness in the last decade, *Nature*, 509, 86-90, DOI: 10.1038/nature13265, 2014, [PDF](#).
61. Peng, S., Piao, S., Zeng, Z., Ciais, P., **Zhou, L.**, Li, L., Myneni, R.B., Yin, Y. and Zeng, H., Afforestation in China cools local land surface temperature, *Proc. Natl. Acad. Sci. USA*, 111 (8), 2915-2919, 2014, [PDF](#).
60. Li, Q., Huang, J., Jiang, Z., **Zhou, L.**, Chu, P. and Hu, K., Detection of urbanization signals in extreme winter minimum temperature changes over Northern China, *Climatic Change*, 122, 595-608, DOI 10.1007/s10584-013-1013-z, 2014, [PDF](#).
59. Yuan, H., Dickinson, R.E., Dai, Y., Shaikh, M.J., **Zhou, L.**, Wei, S. and Ji, D., A 3-D canopy radiative transfer model for global climate modeling: Description, validation and application, *J. Clim.*, 27 (3), 1168-1192, 2014, [PDF](#)
58. Cervarich, M.C., Baidya Roy, S. and **Zhou, L.**, Spatiotemporal structure of wind farm-atmospheric boundary layer interactions, *Energy Procedia*, 40, 530-536, 2013, [PDF](#).
57. **Zhou, L.**, Tian, Y., Chen, H., Dai, Y. and Harris, R.A, Effects of topography on assessing wind farm impacts using MODIS data, *Earth Interactions*, 17 (13), 1-18, 2013, [PDF](#).
56. Hua, W., Chen, H., Zhu, S., Sun, S., Yu, M. and **Zhou, L.**, Hotspots of the sensitivity of the land surface hydrological cycle to climate change, *Chinese Science Bulletin*, 58(30), 3682-3688, doi: 10.1007/s11434-013-5846-7, 2013, [PDF](#).
55. Peng, S., Piao, S., Ciais, P., Friedlingstein, P., **Zhou, L.** and Wang, T., Change in snow phenology and its potential feedback to temperature in the Northern Hemisphere over the last three decades, *Environ. Res. Lett.* 8 014008, DOI:10.1088/1748-9326/8/1/014008, 2013, [PDF](#).
54. **Zhou, L.**, Tian, Y., Baidya Roy, S., Dai, Y. and Chen, H., Diurnal and seasonal variations of wind farm impacts on land surface temperature over Western Texas, *Climate Dynamics*, 41(2). 307-326, DOI:10.1007/s00382-012-1485-y, 2013, [PDF](#).
53. Peng, S., Piao, S., Ciais, P., Friedlingstein, P., Oettle, C., Bréon, F.M., Nan, H., **Zhou, L.** and Myneni, R.B., Response to Comment on “Surface Urban Heat Island Across 419 Global Big Cities, *Environ. Sci. Technol.* 46, 6889–6890, 2012, [PDF](#).
52. **Zhou, L.**, Tian, Y., Baidya Roy, S., Thorncroft, C., Bosart, L.F., and Hu, Y., Impacts of wind farms on land surface temperature, *Nature Climate Change*, 2,539–543, 2012, [PDF](#).
51. Peng, S., Piao, S., Ciais, P., Friedlingstein, P., Oettle, C., Bréon, FM., Nan, H., **Zhou, L.**, and Myneni, R.B., Surface urban heat island across 419 global big cities, *Environ. Sci. Technol.* 12/2011; 46(2):696-703, 2011, [PDF](#).



**Other Institutes (1997-2011)**

50. Arias, P., Fu, R., Hoyos, C.D., Li, W., and **Zhou, L.**, Changes in cloudiness during the last two decades over the Amazon forests: Diagnostic and potential causes, *Climate Dynamics*, 37:1151–1164, DOI 10.1007/s00382-010-0903-2, 2011, [PDF](#).
49. **Zhou, L.**, R. E. Dickinson, A. Dai, and P. Dirmeyer, Detection and attribution of anthropogenic forcing to diurnal temperature range changes from 1950 to 1999: Comparing multi-model simulations with observations, *Climate Dynamics*, DOI: 10.1007/s00382-009-0644-2, 35:1289–1307, 2010, [PDF](#).
48. Chen, H., Dickinson, R. E., Dai, Y., and **Zhou, L.**, Sensitivity of simulated terrestrial carbon assimilation and canopy transpiration to different stomatal conductance and carbon assimilation schemes, *Climate Dynamics*, DOI 10.1007/s00382-010-0741-2, 2010, [PDF](#).
47. **Zhou, L.**, R. E. Dickinson, P. Dirmeyer, A. Dai, and S.-K. Min, Spatiotemporal patterns of changes in maximum and minimum temperatures in multi-model simulations, *Geophys. Res. Lett.*, 36, L02702, doi:10.1029/2008GL036141, 2009, [PDF](#).
46. **Zhou, L.**, Dai, A., Dai, Y., Vose, R.S., Zou, C-Z., Tian, Y., and Chen, H., Spatial dependence of diurnal temperature range trends on precipitation from 1950 to 2004, *Climate Dynamics*, 32:429–440, DOI 10.1007/s00382-008-0387-5, 2009, [PDF](#).
45. Song, C., Lord, J., **Zhou, L.**, and Xiao, J., Empirical evidence for impacts of internal migration on vegetation dynamics in China from 1982 to 2000, *Sensors*, 8, 5069-5080; DOI: 10.3390/s8085069, 2008, [PDF](#).
44. Liu, Q., Gu, L., Dickinson, R.E., Tian, Y., **Zhou, L.** and Post, W.M., Assimilation of satellite reflectance data into a dynamical leaf model to infer seasonally varying leaf area for climate and carbon models, *J. Geophys. Res.*, 113, D19113, doi:10.1029/2007JD009645. 2008, [PDF](#).
43. Dickinson, R.E., **Zhou, L.**, Tian, Y., Liu, Q., Lavergne, T., Pinty, B., Schaaf, C.B., and Knyazikhin, Y., A 3-dimensional analytic model for the scattering of a spherical bush, *J. Geophys. Res.*, 113, D20113, doi:10.1029/2007JD009564, 2008, [PDF](#).
42. Dickinson, R.E., Tian, Y., Liu, Q., and **Zhou, L.**, Dynamics of leaf area for climate and weather models, *J. Geophys. Res.*, 113, D16115, doi:10.1029/2007JD008934, 2008, [PDF](#).
41. **Zhou, L.**, Dickinson, R.E., Tian, Y., Chen, H., and Dai, Y., Asymmetric response of maximum and minimum temperatures to soil emissivity change over the Northern African Sahel in a GCM, *Geophys. Res. Lett.*, 35, L05402, doi:10.1029/2007GL032953, 2008, [PDF](#).
40. Lim, Y-K, Cai, M., Kalnay, E. and **Zhou, L.**, Impact of vegetation types on surface temperature change, *J. Appl. Meteor. Climatol.*, 47, 411-424, 2008, [PDF](#).
39. A contributing author, Denman, K.L., G. Brasseur, A. Chidthaisong, P. Ciais, P.M. Cox, R.E. Dickinson, D. Hauglustaine, C. Heinze, E. Holland, D. Jacob, U. Lohmann, S Ramachandran, P.L. da Silva Dias, S.C. Wofsy and X. Zhang, 2007: Couplings Between Changes in the Climate System and Biogeochemistry. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
38. **Zhou, L.**, Dickinson, R.E., Tian, Y., and Vose, R.S., Impact of vegetation removal and soil aridation on diurnal temperature range in a semiarid region – Application to the Sahel, *Proc. Natl. Acad. Sci. USA*, 104 (46), 17937-17942, 2007, [PDF](#).

37. Kaufmann, R.K., Seto, K.C., Schneider, A, Liu, Z., **Zhou, L.**, and Wang, W., Climate response to rapid urban growth: Evidence of a human-induced precipitation deficit, *J. Clim.*, 20 (10), 2299-2306, 2007, [PDF](#).
36. Piao, S., Fang, J., **Zhou, L.**, and Tan, K., Changes in biomass carbon stocks in China's grasslands between 1982 to 1999, *Global Biogeochem. Cycles*, 21, GB2002, doi:10.1029/2005GB002634, 2007, [PDF](#).
35. Tian, Y., Dickinson, R.E., and **Zhou, L.**, Four-stream isosector approximation for canopy radiative transfer, *J. Geophys. Res.*, 112(D4), D0410710.1029/2006JD007545, 2007, [PDF](#).
34. Piao, S., Friedlingstein, P., Ciais, P., **Zhou, L.**, Chen, A., Effect of climate and CO<sub>2</sub> changes on the greening of the Northern Hemisphere over the past two decades, *Geophys. Res. Lett.*, 33, L23402, doi:10.1029/2006GL028205, 2006, [PDF](#).
33. Piao, S, Fang, J., **Zhou, L.**, Ciais, P., Zhu, B., Variations in satellite-derived phenology in China's temperate vegetation, *Global Change Biol.*, 12, 672-685, 2006, [PDF](#).
32. **Zhou, L.**, R.E. Dickinson, and Y. Tian, Derivation of a soil albedo dataset from MODIS using principal component analysis – Northern Africa and the Arabian Peninsula. *Geophys. Res. Lett.*, 32, L21407, doi:10.1029/2005GL024448, 2005, [PDF](#).
31. Fang, J., Piao, S., **Zhou, L.**, He, J., Wei, F., Myneni, R.B., Tucker, C.J., Tan, K., Precipitation patterns alter growth of temperate vegetation. *Geophys. Res. Lett.*, 32, L21411, doi:10.1029/2005GL024231, 2005, [PDF](#).
30. Lim, Y-K, Cai, M., Kalnay, E. and **Zhou, L.**, Observational evidence of sensitivity of surface climate changes to land types and urbanization. *Geophys. Res. Lett.*, 32, L22712, doi:10.1029/2005GL024267, 2005, [PDF](#).
29. Piao, S, Fang, J., **Zhou, L.**, Zhu, B., and Tan, K., Changes in vegetation net primary productivity from 1982 to 1999 in China. *Global Biogeochem. Cycles*, 19, GB2027, doi:10.1029/2004GB002274, 2005, [PDF](#).
28. **Zhou, L.**, R.E. Dickinson, Y. Tian, J. Fang, Q. Li, R.K. Kaufmann, C.J. Tucker, and R.B. Myneni, Evidence for a significant urbanization effect on climate in China, *Proc. Natl. Acad. Sci. USA*, 101(26), 9540-9544, 2004, [PDF](#).
27. Tian, Y., Dickinson, R.E., **Zhou, L.**, and Shaikh, M., Impact of new land boundary conditions from MODIS data on the climatology of land surface variables, *J. Geophys. Res.*, 109, D20115, doi:10.1029/2003JD004499, 2004, [PDF](#).
26. Tian, Y., Dickinson, R.E., **Zhou, L.**, Myneni, R.B., Friedl, M., Schaaf, C.B., Carroll, M., and Gao, F., Land boundary conditions from MODIS data and consequences for the albedo of a climate model, *Geophys. Res. Lett.*, 31(5), L05504, 10.1029/2003GL019104, 2004, [PDF](#).
25. Tian, Y., Dickinson, R.E., **Zhou, L.**, Zeng, X., Dai, Y., Myneni, R.B., Knyazikhin, Y., Zhang, X., Friedl, M., Yu, H., Wu, W., and Shaikh, M., Comparison of seasonal and spatial variations of LAI/FPAR from MODIS and Common Land Model. *J. Geophys. Res.*, 109 (D1), D01103, 10.1029/2003JD003777, 2004, [PDF](#)
24. Yu, H., R.E. Dickinson, M. Chin, Y.J. Kaufman, M. Zhou, **Zhou, L.**, Y. Tian, O. Dubovik, and B.N. Holben, Direct radiative effect of aerosols as determined from a combination of MODIS retrievals and GOCART simulations, *J. Geophys. Res.*, 109, D03206, doi:10.1029/2003JD003914, 2004, [PDF](#).

23. Kaufmann, R.K., R. D'Arrigo, C. Laskowski, R.B. Myneni, **Zhou, L.**, N. Davi, The effect of growing season and summer greenness on northern forests, *Geophys. Res. Lett.*, 31, L09205, doi:10.1029/2004GL019608, 2004, [PDF](#).
22. Stow, D., A. Hope, D. McGuire, D. Verbyla, J. Gamon, F. Huemmrich, S. Houston, C. Racine, M. Sturm, K. Tape, L. Hinzman, K. Yoshikawa, C. Tweedie, B. Noyle, C. Silapaswan, D. Douglas, B. Griffith, G. Jia, H. Epstein, D. Walker, S. Daeschner, A. Petersen, **Zhou, L.**, and R. Myneni, Remote sensing of vegetation and land-cover change in Arctic tundra ecosystems. *Remote Sens. Environ.*, 89, 281-308, 2004, [PDF](#).
21. **Zhou, L.**, Dickinson, R.E., Tian, Y., Jin, M., Ogawa, K., Yu, H., and Schmugge, T., A sensitivity study of climate and energy balance simulations with use of satellite derived emissivity data over the northern Africa and the Arabian peninsula. *J. Geophys. Res.*, 108(D24), 4795, doi:10.1029/2003JD004083, 2003, [PDF](#).
20. **Zhou, L.**, Dickinson, R.E., Ogawa, K., Tian, Y., Jin, M., Schmugge, T., and Tsvetsinskaya, E., Relations between albedos and emissivities from MODIS and ASTER data over North African desert. *Geophys. Res. Lett.*, 30 (20), 2026, doi:10.1029/2003GL018069, 2003, [PDF](#).
19. **Zhou, L.**, Dickinson, R.E., Tian, Y., Zeng, X., Dai, Y., Yang, Z., Schaaf, C.B., Gao, F., Jin, Y., Strahler, A., Myneni, R.B., Yu, H., Wu, W., and Shaikh, M., Comparison of seasonal and spatial variations of albedos from Moderate-Resolution Imaging Spectroradiometer (MODIS) and Common Land Model. *J. Geophys. Res.*, 108(D15), 4488, doi:10.1029/2002JD003326, 2003, [PDF](#).
18. **Zhou, L.**, Kaufmann, R.K., Tian, Y., Myneni, R.B, and Tucker, C.J., Relation between interannual variations in satellite measures of vegetation greenness and climate between 1982 and 1999. *J. Geophys. Res.*, 108 (D1), 10.1029/2002JD002510, 2003, [PDF](#).
17. Kaufmann, R.K., **Zhou, L.**, Tucker, R.K., Slayback, D., Shabanov, N.V, and Myneni, R.B., Reply to the comment by R. Lanfredi et al. to “variations in northern vegetation activity inferred from satellite data of vegetation Index during 1981 to 1999”. *J. Geophys. Res.*, 108 (D12), 10.1029/2002JD0032872003, [PDF](#).
16. Kaufmann, R.K., **Zhou, L.**, Myneni, R.B., Tucker, C.J., Slayback, D., Shabanov, N.V., and Pinzon, J., The effect of vegetation on surface temperature: a statistical analysis of NDVI and climate data. *Geophys. Res. Lett.*, 30(22), 2147, 10.1029/2003GL018251, 2003, [PDF](#).
15. Piao, S., Fang, J., **Zhou, L.**, Guo, Q., Henderson, M., Ji, W., Li, Y., and Tao, S., Interannual variations of monthly and seasonal NDVI in China from 1982 to 1999. *J. Geophys. Res.*, 108(D14), 10.1029/2002JD002848, 2003, [PDF](#).
14. Fang, J., Piao, S., Field, C.B., Pan, Y., Guo, Q., **Zhou, L.**, Peng, C., and Tao, S., Increasing net primary production in China from 1982 to 1999. *Frontier Ecol. Environ.*, 1(6), 293-297, 2003, [PDF](#).
13. Stow, D., Daeschner, S., Hope, A., Douglas, D., Petersen, A., Myneni, R.B., **Zhou, L.**, and W. Oechel, Variability of the seasonally integrated normalized difference vegetation index across the north slope of Alaska in the 1990s. *Int. J. Remote Sens.*, 24, 1111-1117, 2003, [PDF](#).
12. Shabanov, N.V, **Zhou, L.**, Knyazikhin, Y., Myneni, R.B., and Tucker, C. J., Analysis of interannual changes in northern vegetation activity observed in AVHRR data during 1981 to 1994. *IEEE Trans. Geosci. Remote Sens.*, 40, 115-130, 2002, [PDF](#).
11. Kaufmann, R.K., **Zhou, L.**, Tucker, R.K., Slayback, D., Shabanov, N.V, and Myneni, R.B., Reply to the comment by R. Ahlbeck to “Variations in northern vegetation activity inferred

- from satellite data of vegetation index during 1981 to 1999". *J. Geophys. Res.*, 107(D11), 10.1029/2001JD00151610, 2002, [PDF](#).
10. Bogaert, J., **Zhou, L.**, Tucker, C.J., Myneni, R.B, and Ceulemans, R., Evidence for a persistent and extensive greening trend in Eurasia inferred from satellite vegetation index data. *J. Geophys. Res.*, 107(D11), 10.1029/2001JD001075, 2002, [PDF](#).
  9. Buermann, W., Wang, Y., Dong, J., **Zhou, L.**, Zeng, X., Dickinson, R.E., Potter, C.S., and Myneni, R.B., Analysis of a multi-year global vegetation leaf area index data set. *J. Geophys. Res.*, 107(D22), 10.1029/2001JD000975, 2002, [PDF](#).
  8. Tian, Y., Woodcock, C.E., Wang, Y., Privette, J.L., Shabanov, N.V., **Zhou, L.**, Zhang, Y., Buermann, W., Dong, J., Veikkanen, B., Hame, T., Ozdogan, M., Knyazikhin, Y., and Myneni, R.B., Multiscale analysis and validation of MODIS LAI product over Maun, Botswana, I. Uncertainty assessment. *Remote Sens. Environ.*, 83, 414-430, 2002, [PDF](#).
  7. Tian, Y., Woodcock, C.E., Wang, Y., Privette, J.L., Shabanov, N.V., **Zhou, L.**, Zhang, Y., Buermann, W., Dong, J., Veikkanen, B., Hame, T., Ozdogan, M., Knyazikhin, Y., and Myneni, R. B., Multiscale analysis and validation of MODIS LAI product over Maun, Botswana, II. Sampling strategy. *Remote Sens. Environ.*, 83, 431-441, 2002, [PDF](#).
  6. **Zhou, L.**, Tucker, C.J., Kaufmann, R.K., Slayback, D., Shabanov, N.V, and Myneni, R.B., Variations in northern vegetation activity inferred from satellite data of vegetation index during 1981 to 1999. *J. Geophys. Res.*, 106, 20069-20083, 2001, [PDF](#).
  5. Myneni, R.B, Dong, J., Tucker, C.J., Kaufmann, R.K., Kauppi, P.E., Liski, J. **Zhou, L.**, Alexeyev, V., and Huges, M.K., A large carbon sink in the woody biomass of northern forests. *Proc. Natl. Acad. Sci. USA*, 98(26), 14784-14789, 2001, [PDF](#).
  4. Kaufmann, R. K., **Zhou, L.**, Knyazikhin, Y., Shabanov, N.V, Myneni, R.B., and Tucker, C.J., Effect of orbital drift and sensor changes on the time series of AVHRR vegetation index data. *IEEE Trans. Geosci. Remote Sens.* 38, 2584-2597, 2000, [PDF](#).
  3. **Zhou, L.**, High temperature in North China, cloudy and rainy weather in South China. *Meteorological Monthly*, 24(3), 58-61, 1998 (in Chinese).
  2. **Zhou, L.**, He, J. and Zhu, Y., A feasible scheme for adjusting atmospheric environmental field in numerical simulation models. *Journal of Nanjing Institute of Meteorology*, 20(4), 460-467, 1997 (in Chinese with English abstract).
  1. Wang, S. and **Zhou, L.**, A study on the criterion for interpreting location of storm rainfall associated with typhoon. *Quarterly Journal of Applied Meteorology*, 8(2), 167-174, 1997 (in Chinese with English abstract).

## GRANT FUNDING

### University at Albany (2011-present)

- Principal Investigator, Dynamic and thermodynamic mechanisms of desert amplification in a warming climate, NSF, \$696,071, 09/2020-08/2025 (Co-PI: Brain Rose).
- Principal Investigator, Collaborative research: Linking the long-term Congo drought to changes in Walker-type circulations affecting Equatorial Africa, NSF, \$598,447, 08/2019-07/2025.

- Co-Principal Investigator, MRI: Acquisition of a small Unmanned Aircraft System (UAS) for natural and urban ecosystem studies and risk disaster management, NSF, \$147,983, 09/2015-08/2021 (PI: Alexander Buyantuev; Co-PIs: S. Jiang, A. Lapenis, J. Mower, L. Zhou).
- Principal Investigator, Collaborative research: Understanding Congo rainfall variability and trends, NSF, \$678,158, 09/2015-03/2021.
- Principal Investigator, Understanding spatiotemporal extent and structure of large wind farm footprint on weather and climate by combining observational analysis with numerical modeling, NSF, \$500,000, 09/2012- 08/2017 (Co-PIs: Lance Bosart and Christopher Thorncroft).
- Co-Principal Investigator, Improving monitoring of tropical forests and their characterizations in NCEP models using GOES-R ABI land products data, NOAA, \$155,000, 09/2011-07/2014 (Co-PI: Yuhong Tian. Co-Is: Peter Romanov, Bob Yu, Michael EK).

**Georgia Institute of Technology (2002-2008)**

- Co-Investigator, Water cycle between ocean and land and its influence on climate variability over the south American-Atlantic regions as determined by QuikSCAT/SeaWinds observations, NASA, \$520,346, 01/2006-01/2009 (PI: Rong Fu. Co-Is: Hui Wang and Liming Zhou).
- Co-Investigator, Investigating the influences of vegetation, biomass burning, clouds on wet season onset over the Amazon using Terra, Aqua in conjunction with in situ and other satellite data sets, NASA, \$667,700, 01/2004-01/2007 (PI: Rong Fu. Co-Is: Hongbin Yu, Liming Zhou, and Alison Walker).
- Co-Investigator, Seasonal and global representation of land surface properties from MODIS and other EOS instruments and their implications for application in climate models, NASA, \$449,391,06/2004-05/2007 (PI: Robert Dickinson)
- Co-Investigator, Using EOS data to characterize the impacts of land use change on surface hydrological processes in climate models, NASA, \$1,350,000, 01/2004-01/2007 (PI: Robert Dickinson)

**Boston University (1998-2001)**

- Co-Principal Investigator, Ecological rates of change: Monitoring recent changes in biospheric activity using tree rings and NDVI, NSF, \$240,000, 09/2002-08/2005 (PI: Rosanne D'Arrigo. Co-PIs: Gordon Jacoby and Liming Zhou).
- Recipient of NASA Earth System Science Graduate Fellowship, The relation between interannual variability in atmospheric CO<sub>2</sub>, sea (ENSO) and land surface temperature and global vegetation dynamics observed from an 18-year satellite sensed dataset, NASA, \$66,000, 09/1999-08/2002 (PI: Ranga Myneni)

**SELECTED PRESENTATIONS**

- **Zhou, L.**, Rising planetary boundary layer height over the Sahara Desert and Arabian Peninsula in a warming climate (oral), presented at the 103rd AMS Annual Meeting, Denver, CO, 11 January 2023.
- **Zhou, L.**, Global warming and rising planetary boundary layer height over the Sahara and Arabian Deserts, invited to present at *The Third International Symposium on Land-Atmosphere Interaction: Observations, Modeling and Analysis*, Peking University, Beijing, China, January 9, 2022.

- **Zhou, L.**, Rising planetary boundary layer height over the Sahara Desert and Arabian Peninsula in a warming climate (oral), presented at the AGU21 Fall Meeting, December 13-17, 2021, in New Orleans, LA.
- **Zhou, L.**, Desert amplification and its diurnal asymmetry (oral), presented at the AGU20 Fall Meeting, December 1-17, 2020 (online).
- **Zhou, L.**, Possible causes of the recent long-term drought over the Congo Basin (poster), presented at the AGU Chapman Conference on the Congo Basin, September 25-27, 2018 in Washington, D.C.
- **Zhou, L.**, Understanding the recent long-term drought over the Congo Basin using AMIP-type simulations (poster), presented at the AGU Chapman Conference on the Congo Basin, September 25-27, 2018 in Washington, D.C.
- **Zhou, L.**, Desert Amplification under climate change, invited to present at The Robert Dickinson Symposiums on Earth System Modeling: Past, Present and Future, UT-Austin, Texas. May 14, 2018.
- **Zhou, L.**, Understanding potential large wind farm impacts on local meteorology using satellite data, invited to present at MCLA's spring semester Green Living Seminar, Massachusetts College of Liberal Arts, North Adams, MA, April 5, 2018.
- **Zhou, L.**, Observational evidence for desert amplification using multiple satellite datasets (oral), presented at the AMS 98th Annual Meeting, Seattle, WA, January 9, 2018.
- **Zhou, L.**, Understanding desert amplification using observations from AIRS and other satellites, invited to present at the 2017 NASA Sounder Science Team Meeting at Greenbelt, Maryland, October 24, 2017.
- **Zhou, L.**, Desert amplification and global warming, invited to present at the 4<sup>th</sup> World Conference on Climate Change, Rome, Italy, October 20, 2017.
- **Zhou, L.**, Warming amplification over deserts, invited to present in the College of Atmospheric Sciences, Lanzhou University, Lanzhou, China, July 30, 2017.
- **Zhou, L.**, Large wind farms and our environment: Meteorological impacts, invited to present in the College of Atmospheric Sciences, Lanzhou University, Lanzhou, China, July 28, 2017.
- **Zhou, L.**, Environmental impacts of large operational wind farms from meteorological perspectives, invited to present in the GE101 Seminar Lecture, Boston University, Boston, March 13, 2017.
- **Zhou, L.**, Congo rainforest and climate change from remote sensing perspectives, invited to present in the AGOG484/584 Seminar Lecture, UAlbany, Albany, NY, February 23, 2017.
- **Zhou, L.**, Desert amplification in a warming climate (oral), presented at the AMS 97TH Annual Meeting, Seattle, WA, January 25, 2017.
- **Zhou, L.**, Desert amplification in a warming climate, invited to present at Beijing Normal University, Beijing, China, July 19, 2016.
- **Zhou, L.**, Climatic impacts of large wind farms in Texas, invited to present at The University of Texas at Austin, Austin, TX, June 5, 2015.
- **Zhou, L.**, Wind farms and local climate, invited to present at National Meteorological Center (NMC), China Metrological Administration (CMA), Beijing, China, June 23, 2014.

- **Zhou, L.**, Rainforest and drought in Congo, invited to present at Beijing Normal University, Beijing, China, June 20, 2014.
- **Zhou, L.**, Wind farms and local climate, invited to present at Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China, June 19, 2014.
- **Zhou, L.**, Why has drier land warmed much faster since 1979?, invited to present at Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China, June 19, 2014.
- **Zhou, L.**, Rainforest and drought in Congo, invited to present at Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China, June 19, 2014.
- **Zhou, L.**, Wind farms and local climate, invited to present in the AGOG484/584 Seminar Lecture, UAlbany, Albany, NY, November 18, 2014.
- **Zhou, L.**, Drought & rainforest in the Congo Basin - preface of a fantasy story, invited to present at Joint Colloquium Series at Department of Atmospheric and Environmental Sciences & Atmospheric Sciences Research, UAlbany, Albany, NY, September 29, 2014.
- **Zhou, L.**, Impacts of large wind farms on local climate, selected to represent our departmental research to present at A Celebration of Research, Scholarship and Creative Activity, UAlbany, Albany, NY, September 25, 2013.
- **Zhou, L.**, Assessing possible climatic impacts of large wind farms using satellite data (oral), invited to present at the European Geosciences Union General Assembly 2013, Vienna, Austria, April 8, 2013.
- **Zhou, L.**, Impacts of wind farms on local land surface temperature (poster), presented at the AGU 2012 Fall Meeting, San Francisco, December 6, 2012.
- Tian, Y., **Zhou, L.**, Romanov, P., Yu, B. And Ek, M., Improving monitoring of tropical forests using year 2009 SEVIRI data (poster), presented at the AGU 2012 Fall Meeting, San Francisco, December 9, 2012.
- **Zhou, L.**, Detection and attribution on/of anthropogenic forcing to diurnal temperature range changes (oral), invited to present for the Brown Bag Seminars at University of Alabama in Huntsville, Huntsville, AL, October 17, 2012.
- **Zhou, L.**, The impact of wind farms on local climate (oral), invited by OASIS to present at Guilderland Public Library, Guilderland, NY, October 30, 2012.
- **Zhou, L.**, Changes in maximum and minimum temperatures in observations and multi-model simulations (oral), invited to present at China's National Meteorological Information Center (NMIC), Beijing, China, June 4, 2012.
- **Zhou, L.**, Wind farm impacts on land surface temperature (oral), invited to present at the 1<sup>st</sup> International Symposium on Frontier Research in Atmospheric Sciences, Nanjing University of Information Science and Technology, Nanjing, China, May 25-27, 2012.
- **Zhou, L.**, Asymmetric global warming: Day vs. night (oral), invited to present at NOAA's Climate Test Bed Joint Seminar Series, NASA/Goddard Visitor Center, Greenbelt, MD, May 25, 2011.
- **Zhou, L.**, NSF Geosciences Directorate (oral), presented on the NSF Day at University of Toledo, Toledo, OH, September 21, 2010.
- **Zhou, L.**, Earth system modeling – A personal view (oral), invited to present at the 2010 Summer Colloquium on Earth System Modeling, Tsinghua University, Beijing, July 19, 2010.

- **Zhou, L.**, Interdisciplinary climate research across NSF (oral), invited to present at the UT-Austin Climate Change Studies Symposium, Austin, TX, February 22, 2010.
- **Zhou, L.**, Applications of satellite remote sensing in studies of land-climate interactions (oral), invited to present at George Mason University, February 3, 2010.
- **Zhou, L.**, Satellite remote sensing and applications of land-climate Interactions (oral), invited to present at NOAA/NESDIS, Camp Springs, MD, June 5, 2007.
- **Zhou, L.**, Urbanization and climate in China: Two case studies (oral), invited to present in the Urban-Rural Interfaces Conference, Atlanta, GA, April 9-12, 2007.
- **Zhou, L.**, Using MODIS data to characterize climate model land surface processes-impacts of land cover/use change on surface hydrological processes (oral), presented in the NASA LCLUC Science Team Meeting, Adelphi, Maryland, USA, October 10-12, 2006.
- **Zhou, L.**, Evidence for a significant urbanization effect on climate in China (oral), invited to present in the AGU WPGM, Beijing, China, July 24-27, 2006.
- **Zhou, L.**, Land-Climate Interactions: A synthetic analysis of land surface observations, remote sensing data, and climate modeling (oral), invited to present at Auburn University, Auburn, Alabama, USA, March 21, 2006.
- **Zhou, L.**, Applications of MODIS data in climate models – Georgia Tech efforts (oral), presented in the 2005 EOS/IDS Team meeting, Boston, Massachusetts, USA, September 19-20, 2005.
- **Zhou, L.**, Evaluation of the utility of MODIS and ASTER derived soil emissivity for climate and energy balance simulation (oral), presented in the 2005 MODIS Science Team meeting, Baltimore, Maryland, USA, March 22-24, 2005.
- **Zhou, L.**, Using MODIS data to characterize climate model land surface processes-impacts of land cover/use change on surface hydrological processes (oral), presented in the NASA LCLUC Science Team Meeting, Adelphi, Maryland, USA, January 11-13, 2005.
- **Zhou, L.**, Characterization of spatial variability of arid and semiarid albedos for use in climate models (oral), presented in the NASA IDS Meeting, Adelphi, Maryland, USA, November 15, 2004.
- **Zhou, L.**, Relations between albedos and emissivities from MODIS and ASTER data over North African desert (oral), presented in the 2003 AGU Fall Meeting, San Francisco, California, USA, December 8-12, 2003.
- **Zhou, L.**, Variations in northern vegetation activity inferred from satellite data of vegetation index during 1981 to 1999 (oral), presented in 2000 AGU Fall Meeting, San Francisco, California, USA, December 15-19, 2000.
- **Zhou, L.**, The relation between interannual variability in land surface temperature and global vegetation dynamics observed from an 18-year (1981-1999) satellite sensed data set (oral), presented in IGARSS 2000, Honolulu, Hawaii, USA, July 24-28, 2000.
- **Zhou, L.**, Tropical cyclone forecasting and warning services in China (oral), presented to the visiting WMO Typhoon Committee on behalf of National Meteorological Center, China, November 1996.
- **Zhou, L.**, Operational forecast techniques and systems for very short- and short-range weather prediction in China (oral), presented in the International Workshop on Very Short- and Short-



Range Weather Prediction held by the UCAR and the WMO in Boulder, Colorado, USA, October 21-November 8, 1996.

## TEACHING AND ADVISING

### Courses Offered

#### University at Albany only, 09/2011-present)

- AATM103: Introduction to Climate Change
- AATM200: Natural Disasters
- AATM 321: Physical Meteorology
- AATM 335: Meteorological Remote Sensing
- AATM 504: Atmospheric Physics
- AATM 520: Remote Sensing in Atmospheric Sciences

### Postdoctoral Advisement

- Wenjian Hua, Nanjing University of Information Science & Technology, Ph.D. 2014 (Under advisement 2015-2017)

### Graduate Student Advisement

#### University at Albany only, 2011-present)

- Graduate Students Advised (as the chair of Ph.D. dissertation committee)
  - ✓ Zhou, Li (Prospectus passed in March 2024-; co-advising with Prof. Brian Rose)
  - ✓ Stephen Solimine (Prospectus passed in 2022, Under advisement 2019-)
  - ✓ Kathrin Alber (PhD completed in March 2024, Under advisement 2019-2024)
  - ✓ Alejandro M Ayala (MS completed in August 2022, Under advisement 2019-2022)
  - ✓ Yan Jiang (PhD completed in February 2022, Under advisement 2016-2022)
  - ✓ Ajay Raghavendra (PhD completed in October 2020, Under advisement 2016-2020)
  - ✓ Ron A Harris (Prospectus passed in 2014, Under advisement 2012-2019)
  - ✓ Geng Xia (PhD completed in February 2018, Under advisement 2013-2018)
  - ✓ Lauren M. Slawsky (MS completed in May 2014, Under advisement 2008-2010)
- International Graduate Students Co-advised
  - ✓ Kanzhou Suonan (China University of Geosciences, Under advisement at UAlbany 2019-2020)
  - ✓ Wanxin Zhang (PhD completed in May 2021, Nanjing University of Information Science and Technology, Under advisement at UAlbany 2019-2020)
  - ✓ Jing Li (PhD completed in February 2018, Chinese Academy of Sciences, Under advisement at UAlbany 2016-2017)
  - ✓ Nan Wei (PhD completed in May 2017, Beijing Normal University, Under advisement at UAlbany 2015-2017)
- Graduate Students Advised (as the dissertation committee member)
  - ✓ 20 PhD students
  - ✓ 4 MS students

## PROFESSIONAL SERVICE

### Departmental Level

- Member of Inclusion and Diversity Committee, April 2017 - present
- Member of Graduate Admission Committee, September 2015 - present
- Member of Graduate Program Committee, September 2013 – December 2019
- Member of Department Chair Search Committee, February 2017
- Member of Faculty Search Committee, Department of Atmospheric and Environmental Sciences, New Faculty Hires in Artificial Intelligence, September 2022-April 2023.
- Member of Faculty Search Committee, Department of Atmospheric and Environmental Sciences, Assistant Professor in Earth System Science (two positions), August 2018-April 2019
- Member of Faculty Search Committee, Atmospheric Sciences Research Center, Eco-hydrology and Solar Energy (two positions), September 2012-April 2013
- Member of Faculty Search Committee, Department of Atmospheric and Environmental Sciences, Atmosphere-Oceans Interactions and Climate-Cryosphere Dynamics and Feedbacks (two positions), August 2011-April 2012

### College and University Level

- UAlbany Senator (At-Large), September 2016-May 2019
- Council member of UAlbany *Council* on Libraries, Information Systems, & Computing (LISC), September 2018 - May 2019
- Council member of UAlbany Undergraduate Academic Council (UAC), September 2016- May 2018
- Chair of Academic Development Committee/CAS Faculty Council, October 2013-May 2015
- Member of Academic Support Committee/CAS Faculty Council, October 2012-May 2013
- 2017 Spring Commencement Ceremony, May 21, 2017
- 2015 Spring Commencement Ceremony, May 17, 2015
- Distinguished Candle Lighter, August 21, 2014
- Torch Night Celebration, May 17, 2014
- 2013 Spring Commencement Ceremony, May 19, 2013
- Torch Night Celebration, May 18, 2013
- Distinguished Candle Lighter, May 18, 2013
- 2012 Winter Commencement Ceremony, December 16, 2012
- Torch Night Celebration, May 19, 2012
- Distinguished Candle Lighters, May 19, 2012

### External Professional

- Committee member, The Membership Committee, The University Corporation for Atmospheric Research (UCAR), 2021-2024.
- The UAlbany member representative, The University Corporation for Atmospheric Research (UCAR), September 2019 -
- Committee member, The Renewable Energy Committee, American Meteorological Society, 2019-
- Editorial Board member in *Scientific Reports*, 2016-
- Editorial Board member in *Remote Sensing*, 2016-
- Workshop Facilitator, The UAlbany NSF Proposal Writing Workshop, University at Albany, Albany, October 2, 2020.
- Workshop Facilitator, The SUNY NSF CAREER Proposal Writing Workshop, University at Albany, Albany, March 20-22, 2019.
- Guest editor, Special issue “Remote Sensing of Land-Atmosphere Interactions” in the journal of [Remote Sensing](#) (ISSN 2072-4292), 2018 (with 24 publications).
- The Organizing Committee and Session Chair, The 4<sup>th</sup> World Conference on Climate Change, Rome, Italy, October 19-21, 2017.
- Invited to serve on NASA and NSF review panels
- Invited to review proposals submitted to NASA and NSF
- Served as a Program Director/Associate Program Director in NSF’s Climate and Large-scale Dynamics, 02/2008-07/2011.
- Served on several NSF subcommittees to manage large, multi-disciplinary, geosciences-wide programs (different from my primary role as a NSF core program manager), 02/2008-07/2011
- Served as one of NSF representatives to introduce NSF’s Geosciences to audience at several universities and organizations
- Invited to review manuscripts submitted to ~30 geophysical journals including Nature and its family journals, PNAS, AMS and AGU journals and other international journals.

## RESEARCH HIGHLIGHTS

### University at Albany (2011-present)

- November 28, 2022: **Zhang et al.**, *Nature Climate Change*, 2022 was featured as News & Views by Nature Climate Change: “Floods differ in a warmer future” (<https://www.nature.com/articles/s41558-022-01541-z>)
- July 12, 2022: **Zhao et al.**, *Nature Communications*, 2022 was featured by NASA: “Lake Evaporation on the Rise” (<https://earthobservatory.nasa.gov/images/150067/lake-evaporation-on-the-rise>)
- June 28, 2022: **Zhao et al.**, *Nature Communications*, 2022 was press released by Texas A&M “With Changing Climate, Global Lake Evaporation Loss Larger Than Previously Thought” (<https://today.tamu.edu/2022/06/28/with-changing-climate-global-lake-evaporation-loss-larger-than-previously-thought/>)

- September 24, 2020: **Jiang et al.**, *ERL*, 2020 was press released by UAlbany “*Study: Decreasing Wildfires Observed Over Central Africa*” (<https://www.albany.edu/news/94351.php>)
- September 16, 2020: **Jiang et al.**, *ERL*, 2020 was featured by phys.org “*Decreasing Wildfires Observed over Central Africa*” (<https://phys.org/news/2020-09-decreasing-wildfires-central-africa.html>)
- July 3, 2019: **Jiang et al.**, *Nature Climate Change*, 2019 was featured by NASA: “*A Longer Dry Season in the Congo Rainforest*” (<https://earthobservatory.nasa.gov/images/145253/a-longer-dry-season-in-the-congo-rainforest>)
- July 2, 2019: **Jiang et al.**, *Nature Climate Change*, 2019 was press released by UAlbany: “*Study: Longer Summer Dry Season Observed in Congo Rainforest*” (<https://www.albany.edu/news/91796.php>)
- January 11, 2018: **Xia et al.**, *Monthly Weather Review*, 2018 was press released by UAlbany: “*Modeling wind power’s impact on local climate*” (<http://www.albany.edu/news/83893.php>)
- December 14, 2016: **Hua et al.**, *Environmental Research Letters*, 2014 was press released by UAlbany: “*Solving the puzzle: drought in central Africa*” (<http://www.albany.edu/news/75403.php>)
- October 13, 2015: **Zhou et al.** *Nature*, 2014 was featured “Heart of Drought” in *Sensing Our Planet, NASA Earth Science Research 2015* (<https://earthdata.nasa.gov/user-resources/sensing-our-planet/heart-of-drought>)
- May 28, 2014: **Zhou et al.** *Nature*, 2014 was featured as one of Research Highlights titled “*Forest ecology: Congo forest browning*” on the June 2014 issue in *Nature Climate Change* (<https://www.nature.com/articles/nclimate2261>)
- April 23, 2014: **Zhou et al.**, *Nature*, 2014 was press released by Nature, NASA and UAlbany: “*Potential impacts of long-term drought on Congo rainforest*” ([http://www.atmos.albany.edu/facstaff/zhou/press\\_release\\_Congo\\_forest.htm](http://www.atmos.albany.edu/facstaff/zhou/press_release_Congo_forest.htm))
- April 30, 2012: **Zhou et al.**, *Nature Climate Change*, 2012 was press released by Nature, NSF, NASA and UAlbany: “*Possible impacts of wind farms on local land surface temperature*” ([http://www.atmos.albany.edu/facstaff/zhou/press\\_release\\_wind\\_farm.htm](http://www.atmos.albany.edu/facstaff/zhou/press_release_wind_farm.htm))

#### **Georgia Institute of Technology (2002-2008)**

- July 2, 2007: **Kaufmann et al.**, *GEC*, 2007 was press released by Stanford University: “*Satellite images reveal link between urban growth, changing rainfall patterns*” (<http://news-service.stanford.edu/news/2007/july11/seto-071107.html>)
- September 1, 2005: **Zhou et al.**, *JGR*, 2001 has been acknowledged by *Thomson-ISI*® to be one of the most cited papers in the field of Geosciences (<http://www.esi-topics.com/fmf/2005/september05-LimingZhou.html>)
- June 22, 2004: **Zhou et al.**, *PNAS*, 2004 was press released by Georgia Tech: “*Heating up: Study shows rapid urbanization in China warming the regional climate faster than other urban area*” ([http://www.atmos.albany.edu/facstaff/zhou/urbanization\\_newsrelease.html](http://www.atmos.albany.edu/facstaff/zhou/urbanization_newsrelease.html))
- November 20, 2003: **Kaufmann et al.**, *GRL*, 2003 was highlighted by the AGU: “*Vegetation’s effect on summer warming may not last*” ([https://www.eurekalert.org/pub\\_releases/2004-01/agu-ajh010604.php](https://www.eurekalert.org/pub_releases/2004-01/agu-ajh010604.php))

**Boston University (1998-2001)**

- December 24, 2001: **Zhou et al., JGR, 2001** made the Scientific American top 50 science stories of 2001  
([http://www.atmos.albany.edu/facstaff/zhou/SA\\_topsciencestoriesof2001.pdf](http://www.atmos.albany.edu/facstaff/zhou/SA_topsciencestoriesof2001.pdf))
- December 18, 2001: **Myneni et al., PNAS, 2001** was press released by NASA-HQ, EFI and BU: “A large carbon sink in the woody biomass of northern forests”.  
(<http://cybele.bu.edu/biomass/biomass.html>)
- September 4, 2001: **Zhou et al., JGR, 2001** was press released by NASA-HQ, NASA-GSFC, AGU and BU: “Earth is becoming a greener greenhouse”.  
(<http://cybele.bu.edu/greenergh/ggh.html>)

**HONOURS AND AWARDS**

- Chancellor’s Excellence Award in Research and Creative Activities, 2024
- President’s Excellence Award in Research and Creative Activities, 2023
- Director’s Award for Collaborative Integration, NSF, 2009
- NASA Earth System Science Fellow, NASA, 1999-2001
- Award for Excellent Workers, National Meteorological Center (China), 1998
- Scientific and Technical Award, National Meteorological Center (China), 1998
- Scientific and Technical Award, Shanghai Meteorological Bureau (China), 1996
- Excellent Academic Thesis Prize, Beijing Meteorological Society (China), 1996
- Excellent Academic Thesis Prize, National Meteorological Center (China), 1996
- Excellent Forecast Prize, Beijing Meteorological Society (China), 1995

**PROFESSIONAL AFFILIATIONS**

- American Geophysical Union (AGU), 2001-present
- European Geophysical Union (EGU), 2013-present
- American Meteorological Society (AMS), 2016-present