**Yuting Zhou**

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**Education**

**Ph.D.** in *Ecology and Evolutionary Biology*, May 2017, Department of Microbiology and Plant Biology, University of Oklahoma, USA

**M.S.** in *Ecology*, July 2013, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China

**B.S.** in *Resource, Environment, and Urban/Rural Planning and Management,* July 2010, Shandong University of Science and Technology, China

**Professional experience**

**Aug 2019-Present** Assistant Professor in Department of Geography

Co-Director of the Center for Applications of Remote Sensing Oklahoma State University (<https://cars.okstate.edu/>)

**Aug 2017-Aug 2019** Post-Doctoral Fellow at USDA-ARS Grazinglands Research Laboratory

**Aug 2013-May 2017** Graduate Research Assistant at University of Oklahoma

**May 2016-Jun 2016** Guest Lecturer at University of Oklahoma

**Aug 2015-Dec 2015** Graduate Teaching Assistant at University of Oklahoma

**Aug 2014-Dec 2014** Graduate Teaching Assistant at University of Oklahoma

**Research Interests**

Land use and land cover change

Agriculture and natural resources management

Applications of remote sensing and spatial analysis to food-water-energy nexus

Monitoring, early warning, and impact assessment of agricultural drought

Sustainable development of coupled human and natural systems

**Peer Reviewed Journal Publications** **(\*indicates corresponding author)**

51. Liu, W., Dong, J., Du, G., Zhang, G., Hao, Z., You, N., Zhao, G., Flynn, K.C., Yang, T., **Zhou, Y.\*** (2022). Biophysical effects of paddy rice expansion on land surface temperature in northeastern Asia. *Agricultural and Forest Meteorology.* Volume 315, 108820.

50. **Zhou, Y.\*,** Flynn, K.C., Gowda, P.H., Wagle, P., Ma, S., Kakani, V.G., Steiner, J.L. (2021). The potential of active and passive remote sensing to detect frequent harvesting of alfalfa. *International Journal of Applied Earth Observation and Geoinformation*. 104, 102539.

49. Flynn, K.C., Lee, T., Endale, D., Franzluebers, A., Ma, S., **Zhou, Y.** (2021). Assessing Remote Sensing Vegetation Index Sensitivities for Tall Fescue (Schedonorus arundinaceus) Plant Health with Varying Endophyte and Fertilizer Types: A Case for Improving Poultry Manuresheds. *Remote Sens.* 13(3), 521.

48. Wu, J., Li, M., Zhang, X., Fiedler, S., Gao, Q., **Zhou, Y.,** Cao, W., Hassan, W., Margarint, M.C., Tarolli, P. Tietjen, B. (2021). Disentangling climatic and anthropogenic contributions to nonlinear dynamics of alpine grassland productivity on the Qinghai-Tibetan Plateau. *Journal of Environmental Management* Volume 281

47. Yildirim, T., **Zhou, Y.,** Flynn, K.C., Gowda, P.H., Ma, S. and Moriasi, D.N. (2020). Evaluating the sensitivity of vegetation and water indices to monitor drought for three Mediterranean Crops. *Agronomy Journal.* doi:10.1002/agj2.20475

46. Bajgain, R., Xiao, X., Basara, J., Doughty, R., Wu, X., Wagle, P., **Zhou, Y.,** Gowda, P., Steiner, J. (2020). Differential responses of native and managed prairie pastures to environmental variability and management practices. *Agricultural and Forest Meteorology.* Volume 294

45. **Zhou, Y.** Gholizadeh, H. LaVanchy, G.T. Hasan, E. (2020). Inspecting the Food–Water Nexus in the Ogallala Aquifer Region Using Satellite Remote Sensing Time Series. *Remote Sens.* 12, 2257.

44. Steiner, J.L. Wetter, J. Robertson, S. Teet, S. Wang, J. Wu, X. **Zhou, Y.** Brown, D. Xiao, X. (2020). Grassland Wildfires in the Southern Great Plains: Monitoring Ecological Impacts and Recovery. *Remote Sens.* 12, 619.

43. Wagle, P., P. H. Gowda, J. P. S. Neel, B. K. Northup, and **Y. Zhou**. (2020). Integrating Eddy Fluxes and Remote Sensing Products in a Rotational Grazing Native Tallgrass Prairie Pasture. *Science of The Total Environment* 712: 136407

42. Flynn, K.C., **Zhou, Y\*.,** Gowda, P.H., Moffet, C.A., Wagle, P. and Kakani, V.G. (2019). Burning and Climate Interactions Determine Impacts of Grazing on Tallgrass Prairie Systems. *Rangeland Ecology & Management.*

41. Ma, S., **Zhou, Y\*.,** Gowda, P., Chen, L., Starks, PJ., Steiner, L.J., Neel, P.S.J. (2019). Evaluating the Impacts of Continuous and Rotational Grazing on Tallgrass Prairie Landscape Using High-Spatial-Resolution Imagery. *Agronomy* 9(5), 238.

40. **Zhou, Y\*.,** Gowda, P., Wagle, P., Ma, S., Neel, P.S.J., Kakani, V.G., Steiner, L.J.. (2019). Climate effects on tallgrass prairie responses to continuous and rotational grazing. *Agronomy* 9(5), 219.

39. Ma, S., **Zhou, Y\*.,** Chen, L., Gowda, P., Dong, J., Zhang, G., Kakani, V., Wagle, P., Chen, L., Flynn, K.C., Jiang, W. (2019). Application of the water-related spectral reflectance indices: A review. *Ecological Indicators* 98:68-79.

38. Bajgain, R., Xiao, X., Basara, J., Wagle, P., **Zhou, Y.,** Mahan, H., Gowda, P., McCarthy, H.R., Northup, B., Neel, J. and Steiner, J. (2018). Carbon dioxide and water vapor fluxes in winter wheat and tallgrass prairie in central Oklahoma. *Science of the Total Environment,* 644:1511-1524.

37. Xu, W., Qin, Y., Xiao, X., Di, G., Doughty, R., **Zhou, Y.,** Zou, Z., Kong, L., Niu, Q., Kou, W. (2018). Quantifying spatial-temporal changes of tea plantations in complex landscapes through integrative analyses of optical and microwave imagery. *International Journal of Applied Earth Observation and Geoinformation,* 73:697-711.

36. Wagle, P., Gowda, P.H., Northup, B.H., Turner, K.E., Neel, P.S.J., Manjunatha, P., **Zhou, Y.** (2018). Variability in carbon dioxide fluxes among six winter wheat paddocks managed under different tillage and grazing practices. *Atmospheric Environment,* 185:100-108.

35. Doughty, R., Xiao, X., Wu, X., Zhang, Y., Bajgain, R., **Zhou, Y.,** Qin, Y., Zou, Z., McCarthy, H., Friedman, J. and Wagle, P. (2018). Responses of gross primary production of grasslands and croplands under drought, pluvial, and irrigation conditions during 2010–2016, Oklahoma, USA. *Agricultural Water Management*, 204:47-59.

34. Zhang, G., Biradar, C. M., Xiao, X., Dong, J., **Zhou, Y.,** Qin, Y., Zhang, Y., Liu, F., Ding, M. and Thomas, R. J. (2018). Exacerbated grassland degradation and desertification in Central Asia during 2000–2014. *Ecological Applications*, 28: 442–456.

33. Qin Y., Xiao X., Dong J., **Zhou Y.,** Wang J., Doughty R., Chen Y., Zou Z., Moore B. (2017). Annual dynamics of forest areas in South America during 2007–2010 at 50- m spatial resolution. *Remote Sensing of Environment,* 201:73-87.

32. **Zhou, Y.,** Xiao, X., Zhang, G., Wagle, P., Bajgain, R., Dong, J., Jin, C., Basara, B.J., Anderson, C. M., Hain, R.C., Otkin, A. J. (2017). Quantifying agricultural drought in tallgrass prairie region in the U.S. Southern Great Plains through analysis of a water-related vegetation index from MODIS images. *Agricultural and Forest Meteorology,* 246:111-122.

31. **Zhou, Y.,** Xiao, X., Wagle, P., Bajgain, R., Mahan, H., Basara, B.J., Dong, J., Qin, Y., Zhang, G., Luo, Y., Gowda, P.H., Neel, P.S.J., Steiner, L.J. (2017). Examining the short-term impacts of diverse management practices on plant phenology and carbon fluxes of Old World bluestems pasture. *Agricultural and Forest Meteorology,* 237-238:60-70.

30. Zhang, G., Xiao, X., Biradar, C., Dong, J., Qin, Y., Menarguez, M., **Zhou, Y.,** Zhang, Y., Jin, C., Wang, J., Doughty, R., Ding, M., Moore, B. (2016). Spatiotemporal patterns of paddy rice croplands in China and India from 2000 to 2015. *Science of the Total Environment,* 579:82-92.

29. Bajgain, B., Xiao, X., Basara, J., Wagle, P., **Zhou, Y.,** Zhang, Y., Mahan, H. (2016). Assessing agricultural drought in summer over Oklahoma Mesonet sites using the water-related vegetation index from MODIS. *International Journal of Biometeorology,* 61(2):377-390.

28. **Zhou, Y.**, Xiao, X., Qin, Y.W., Dong, J.W., Zhang, G.L., Kou, W.L., Jin, C, Wang, J., Li, X.P. (2016). Mapping paddy rice planting area in rice-wetland mixed areas through analysis of Landsat 8 OLI and MODIS images. *International Journal of Applied Earth Observation and Geoinformation,* 46:1-12.

27. Dong, J., Xiao, X., Kou, W., Qin, Y., Zhang, G., Li, L., Jin, C., **Zhou, Y.,** Wang, J., Biradar, C., Liu, J., Moore III, B. (2015). Tracking the dynamics of paddy rice planting area in 1986–2010 through time series Landsat images and phenology-based algorithms. *Remote Sensing of Environment,* 160:99-113.

26. Dong, J., Xiao, X., Wagle, P., Zhang, G., **Zhou, Y.,** Jin, C., Torn, M., Meyers, T., Suyker, A., Wang, J., Yan, H., Biradar, C., Moore, B. (2015). Comparison of four EVI-based models for estimating gross primary production of maize and soybean croplands and tallgrass prairie under severe drought. *Remote Sensing of Environment,* 162:154-168.

25. Qin, Y., Xiao, X., Dong, J., **Zhou, Y.,** Zhu, Z., Zhang, G., Du, G., Jin, C., Kou, W., Wang, J., Li, X. (2015). Mapping paddy rice planting area in cold temperate climate region through analysis of time series Landsat 8 (OLI), Landsat 7 (ETM+) and MODIS imagery. *ISPRS Journal of Photogrammetry and Remote Sensing*, 105:220–233.

24. Wang, J., Xiao, X., Qin,Y., Dong, J., Zhang, G., Kou, W., Jin, C., **Zhou, Y.,** Zhang, Y. (2015). Mapping paddy rice planting area in wheat-rice double-cropped areas through integration of Landsat-8 OLI, MODIS, and PALSAR images. *Scientific Reports,* 5:1-11.

23. Zhang, G., Xiao, X., Dong, J., Kou, W., Jin, C., Qin, Y., **Zhou, Y.,** Wang, J., Menarguez, M., Biradar, C. (2015). Mapping paddy rice planting areas through time series analysis of MODIS land surface temperature and vegetation index data. *ISPRS Journal of Photogrammetry and Remote Sensing,* 106:157-171.

22. Wagle, P., Xiao, X., Scott, R. L., Kolb, T. E., Cook, D. R., Brunsell, N., Baldocchi, D. D., Basara, J., Matamala, R., **Zhou, Y.,** Bajgain, R. (2015). Biophysical controls on carbon and water vapor fluxes across grassland climatic gradient in the United States. *Agricultural and Forest Meteorology,* 214:293-305.

21. Fu, G., Shen, Z., Sun, W., Zhong, Z., Zhang, X., **Zhou, Y.** (2015). A meta-analysis of the effects of experimental warming on plant physiology and growth on the Tibetan Plateau. *Journal of Plant Growth Regulation,* 34(1):57-65.

20. Bajgain, B., Xiao, X., Wagle, P., Basara, J., **Zhou, Y.** (2015). Sensitivity analysis of vegetation indices to drought over two tallgrass prairie sites. *ISPRS Journal of Photogrammetry and Remote Sensing,* 108:151-160.

19. Fu, G., Zhang, X., **Zhou, Y.**, Yu, C., Shen, Z. (2014). Partitioning sources of ecosystem and soil respiration in an alpine meadow of Tibet Plateau using regression method. *Polish Journal of Ecology,* 62(1):17-24.

18. Wu J., Shen Z., Shi P., **Zhou Y.,** & Zhang X. (2014). Effects of grazing exclusion on plant functional group diversity of alpine grasslands along a precipitation gradient on the northern Tibetan Plateau. *Arctic, Antarctic, and Alpine Research,* 46:419-429.

17. Yang, P., Fu, G., Li., Y., **Zhou, Y.**, Shen, Z. (2014). Aboveground biomass assessment in the Northern Tibet Plateau using ground-level remotely-sensed data. *Pratacultural Sciences,* 31(7):1211-1217 (In Chinese with English Abstract).

16. Fu, G., Zhang, X., Yu, C., Shi, P., **Zhou, Y.**, Li., Y., Yang, P., Shen, Z. (2014). Response of soil respiration to grazing in an alpine meadow at three elevations in Tibet. *The Scientific World Journal* 2014.

15. Fu, G., Zhang, X., Zhang, Y., Shi, P., Li., Y., **Zhou, Y.**, Yang, P., Shen, Z. (2013). Experimental warming does not enhance gross primary production and above-ground biomass in the alpine meadow of Tibet. *Journal of Applied Remote Sensing,* 7(1):073505.

14. Fu, G., Zhang, Y., Zhang, X., Shi, P., **Zhou, Y.**, Li., Y., Shen, Z. (2013). Response of ecosystem respiration to experimental warming and clipping in Tibetan alpine meadow at three elevations. *Biogeosciences Discussions,* 10(8):13015-13047.

13. Fu, G., Shen, Z., Zhang, X., Yu, C., **Zhou, Y.**, Li., Y., Yang, P. (2013). Response of ecosystem respiration to experimental warming and clipping at daily time scale in an alpine meadow of Tibet. *Journal of Mountain Science,* 10(3):455-463.

12. Li, Y., **Zhou, Y.,** Zhang, X., Shen, Z., Shi, P., Yu, C., Wu, J. (2013). Awareness and reaction of herdsmen to the policy of Returning Grazing Land to Grasslands in the Changtang Plateau, Tibet. *Pratacultural Science,* 30(5):788-794 (In Chinese with English Abstract).

11. **Zhou, Y.,** Fu, G., Shen, Z., Zhang, X., Wu, J. (2013). Estimating model of aboveground biomass in the northern Tibet Plateau based on remote sensing date. *Acta Prataculturae Sinica,* 22(1):120-129 (In Chinese with English Abstract).

10. Fu, G., Shen, Z., Zhang, X., **Zhou, Y.** (2012). Response of soil microbial biomass to short-term experimental warming in alpine meadow on the Tibetan Plateau. *Applied Soil Ecology*, 61:158-160.

9. Fu, G., Shen Z., Zhang, X., **Zhou, Y.**, Zhang, Y. (2012). Response of microbial biomass to grazing in an alpine meadow along an elevation gradient on the Tibetan Plateau. *European Journal of Soil Ecology,* 52:27-29.

8. Wu, J., Li, X., Shen, Z., Zhang, X., Shi, P., Yu, C., Wang, J., **Zhou, Y.** (2012). Species diversity distribution pattern of alpine grasslands communities along a precipitation gradient across Northern Tibetan Plateau. *Acta Prataculturae Sinica,* 27(3):17-25. (In Chinese with English Abstract).

7. Fu, G., Shen, Z., Zhang, X., Shi, P., He, Y., Zhang, Y., Sun, W., Wu, J., **Zhou, Y.**, Pan, X. (2012). Calibration of MODIS-based gross primary production over an alpine meadow on the Tibetan Plateau. *Canadian Journal of Remote Sensing,* 38(2):157-168.

6. Fu, G., Shen, Z., Zhang, X., Shi, P., He,Y., Sun, W., Wu, J., **Zhou, Y.** (2012). Modeling light use efficiency of an alpine meadow on Northern Tibetan Plateau using Evaporative Fraction and air temperature. *Journal of Natural Resources,* 27(3):450-459. (In Chinese with English Abstract).

5. Fu, G., Shen, Z., Zhang, X., Shi, P., He, Y., Wu, J., **Zhou, Y.** (2011). Modeling soil respiration of alpine meadow on the Northern Tibet Plateau using MODIS and climate data. *Acta Agrestia Sinica,* 19(3):400-405. (In Chinese with English Abstract).

4. Fu, G., Shen, Z., Zhang, X., Shi, P., He, Y., Wu, J., **Zhou, Y.** (2011). Modelling light use efficiency of alpine meadows on the Northern Tibetan Plateau based on the MODIS algorithm. *Acta Prataculturae Sinica,* 21(1):239-247 (In Chinese with English Abstract).

3. Fu, G., **Zhou, Y.**, Shen, Z., Zhang, X., Wu, J. (2011). Relationships between aboveground biomass and climate factors on alpine meadow in Northern Tibet. *Chinese Journal of Grassland,* 33(4):31-36. (In Chinese with English Abstract).

2. Fu, G., **Zhou, Y.**, Shen, Z., Zhang, X., Shi, P., He, Y., Yu, G., Wu, J. (2011). Satellite-based modeling light use efficiency of alpine meadow along an altitudinal gradient. *Acta Ecologica Sinica,* 31(23):6989-6998. (In Chinese with English Abstract).

1. Fu, G., **Zhou, Y.**, Shen, Z., Zhang, X., Shi, P., He, Y., Wu, J. (2010). Relationships between ecosystem respiration and environmental factors of alpine grazing meadows along an altitudinal gradient (4300~4700m). *Ecology and Environmental Sciences,* 19(12):2789-2794. (In Chinese with English Abstract).

**Papers in preparation/under review (\*indicates corresponding author)**

3. Flynn, K.C., Ma, S., **Zhou, Y. \***, Wagle, P., Gowda, P.H., Starks, P.J., Bajgain, R., Xiao, X., Basara, J., Steiner, J. Responses of ecosystem-atmosphere exchange to precipitation pulses in adjacent native and introduced prairie pastures (In preparation).

2. Flynn, K.C., Wetter, J., Witt, T., **Zhou, Y.,** Ma, S., Natalie, V.A. Rapid in-field peanut (Arachis hypogaea L.) germination detection technique utilizing unmanned aerial systems and object-based image analysis (Under review in *Precision Agriculture*).

1. Christian, J., Basara, J.B., Lowman, L.E.L., Xiao, X., Mesheske, D., **Zhou, Y.** Flash Drought Identification from Satellite-Based Land Surface Water Index (Under review in *Remote Sensing Applications: Society and Environment*).

**Funded Projects**

3. NSF EPSCoR: Socially Sustainable Solutions for Water, Carbon, and Infrastructure Resilience in Oklahoma, $257,700 out of $20,000,000, co-PI

2. USGS AmericaView: StateView Program Development and Operations for the State of Oklahoma, $23,500, 2019,2020, 2021, PI for OklahomaView

1. 3D Printer for Physical Geography and Geospatial Courses from Student Technology Fee Program in the College of Arts and Sciences at Oklahoma State University, $3,075.87, co-PI with Michael Larson

**Teaching Experience**

2022 Primary Instructor *GEOG 5343* *Advanced GIS: Resource Management Applications*

2019 - 2022 Primary Instructor *GEOG 2344 Digital Tools for Environmental Exploration*

2019 - 2021 Primary Instructor *GEOG 4203 Fundamentals of GIS*

2016 Guest Lecturer *PBIO 4970 Environmental Sampling Methods*

2014 -2015 Teaching Assistant *GIS/PBIO 4733/5733 Environmental Remote Sensing*

**Professional Conference Presentations**

35. Liu, W., Dong, J., Zhang, G., Yang, T., **Zhou, Y**. Cooling effects of green fodder expansion in the northeastern Tibetan Plateau*. AGU fall meeting*, December 13-17, 2021, New Orleans, USA (Poster).

34. **Zhou, Y.,** Flynn, K.C.,Gowda, P.H., Wagle, P., Ma, S., Kakani, V., Steiner, L.J. Detecting frequent harvesting of alfalfa using active and passive remote sensing. *AGU fall meeting*, December 1-17, 2020, Online (Poster)

33. Flynn, K.C., Lee, T., Endale, D., Franzluebers, A., Ma, S., **Zhou, Y.** Remote Sensing of Tall Fescue (*Schedonorus arundinaceus*) Plant Health with Varying Endophyte and Fertilizer Types: A Case for Improving Poultry Manuresheds. *AGU fall meeting*, December 1-17, 2020, Online (Poster)

32. Steiner, L.J., Starks, P.J., Neel, P.S.J., Northup, B., Turner, K., Gowda, P., Colman, S., Brown, M., **Zhou, Y.,** Wagle, P., Peterson, B., Xiao, X. Managing Tallgrass Prairies for Productivity and Ecological Function: A Long Term Grazing Experiment in the Southern Great Plains, USA. *AGU fall meeting*, December 9-13, 2019, San Francisco USA (Oral).

31. Ma, S., **Zhou, Y.,** Gowda, P.H., Starks, P.J., Steiner, J.L., Neel, J.P.S. Comparing the impacts of continuous and rotational grazing on tallgrass prairie landscape using the National Agriculture Imagery Program imagery. *AGU Fall Meeting*, December 09-13, 2019, San Francisco, USA (Poster).

30. Flynn, K.C.,Ma, S., **Zhou, Y.,** Wagle, P.,Gowda, P.H., Starks, P.J., Bajgain, R., Xiao, X., Basara, J., Steiner, J.L. Responses of ecosystem-atmosphere exchange to precipitation pulses in adjacent native and introduced prairie pastures. *AGU Fall Meeting*, December 09-13, 2019, San Francisco, USA (Poster).

29. **Zhou, Y.,** Gowda, P.H., Wagle, P., Ma, S., Neel, J.P.S., Kakani, V., Steiner, J.L.29. Responses of tallgrass prairie to continuous and rotational grazing under different climate conditions. *AGU Fall Meeting*, December 09-13, 2019, San Francisco, USA (Poster).

28. Bajgain, R., Xiao, X., Basara, J., Doughty, R., Wu, X., Wagle, P., **Zhou, Y.,** Gowda, P.H., Steiner, J.L. Variability in gross primary productivity of native and managed pastures to climatic variability and management practices. *AGU Fall Meeting*, December 09-13, 2019, San Francisco, USA (Oral).

27. Dong, J., Xiao, X., Zhang, G., Qin, Y., Wang, J., Jin, C., **Zhou, Y.** Reversed pattern of paddy rice planting area in northern and southern China during the 21st century. *AGU fall meeting*, December 10-14, 2018, Washington D.C., USA (Poster).

26. Flynn, K.C., **Zhou, Y.,** Moffet, C., Flynn, K.C., Steiner, J. Response of grassland phenology to burning and grazing in different climatic conditions in Southern Oklahoma. *AGU fall meeting*, December 10-14, 2018, Washington D.C., USA (Poster).

25. Wagle, P., **Zhou, Y.,** Gowda, P.H. Integrating eddy fluxes and multiple remote sensing products in a rotational grazing native pasture. *AGU fall meeting*, December 10-14, 2018, Washington D.C., USA (Poster).

24. **Zhou, Y.,** Gowda, P.H., Wagle, P., Kakani, V., Yildirim, T. Examine the impact of different managements on grassland productivity at global FLUXNET sites. *AGU fall meeting*, December 10-14, 2018, Washington D.C., USA (Poster).

23. Yildirim, T., **Zhou, Y.,** Flynn, K.C., Gowda, P.H., Akkuzu, E., Kurucu, Y., Evaluating the Impacts of Drought on Three Different Mediterranean Crops Using Remote Sensing. *ASA and CSSA Meeting with the Canadian Society of Agronomy*, November 4-7, 2018, Baltimore, Maryland, USA (Poster).

22. **Zhou, Y.,** Xiao, X., Jiang, W., Dong, J., Basara, J., AghaKouchak, A., Gowda, P., Kakani, V. Water-related spectral reflectance indices: principle, constructing, application, and improvement. *AGU fall meeting*, December 11-15, 2017, New Orleans, Louisiana, USA (Poster).

21. Zhang, G., Xiao, X., Dong, J., Zhang, Y., Xin, F., **Zhou, Y.,** Jie, W., Wu, X., Moore, B. Effects of paddy rice agriculture on the seasonal dynamics of atmospheric methane concentration. *AGU fall meeting*, December 11-15, 2017, New Orleans, Louisiana, USA (Poster).

20. Doughty, R., Xiao, X., Qin, Y., Wu, X., Zhang, Y., Zou, Z., Bajgain, R., **Zhou, Y.,** Basara, J., McCarthy, H., Friedman, J. Sensitivity of gross primary production of irrigation-permitted and non-permitted grassland and croplands to drought and pluvial conditions during 2010-2016. *AGU fall meeting*, December 11-15, 2017, New Orleans, Louisiana, USA (Poster).

19. Bajgain, R., Xiao, X., Doughty, R., Zhang, Y., Basara, J., Wagle, P., **Zhou, Y.,** Gowda, P., Steiner, J. Climate variability and productivity of grassland under different management systems. *AGU fall meeting*, December 11-15, 2017, New Orleans, Louisiana, USA (Poster).

18. Xiao, X., Zhang, Y., Wu, X., **Zhou, Y.,** Bajgain, R., Basara, J., Crowell, S., Doughty, R., Moore, B. Seasonal dynamics and inter-annual variation of solar-induced chlorophyll fluorescence and gross primary production of vegetation in North America. *2017 Joint NACP and AmeriFlux Principle Investigators Meeting*, March 27-30, 2017, North Bethesda, Maryland, USA (Poster).

17. **Zhou, Y.,** Xiao, X., Stanton, M., Doughty, R., Bajgain, R., Basara, J., Steiner, J. Consecutive years of agricultural drought drove the large losses of cattle production in the U.S. Southern Great Plains. *Oklahoma Natural Resources Conference 2017*, February 22-24, 2017, Tulsa, Oklahoma, USA (Oral).

16. Mahan, H., Basara, J., Ryu, Y., Huang, Y., Jiang, C., Xiao, X., **Zhou, Y.,** Bajgain, R., Wagle, P. Evaluation of evapotranspiration from the Breathing Earth System Simulator (BESS) land surface model over the Southern Great Plains of the United States. *AGU fall meeting*, December 12-16, 2016, San Francisco, California, USA (Poster).

15. **Zhou, Y.,** Xiao, X., Wagle, P., Bajgain, R., Mahan, H., Basara, J., Dong, J., Qin, Y., Zhang, G., Luo, Y., Steiner, J., Gowda, P., Neel, J. Detecting the fingerprints of complex land management practices in a tallgrass prairie site using PhenoCam, satellite remote sensing, and the eddy covariance technique. *AGU fall meeting,* December 12-16, 2016, San Francisco, California, USA (Oral).

14. Bajgain, R., Xiao, X., Basara, J., Wagle, P., **Zhou, Y.,** Gowda, P., Mahan, H., Steiner, J. Carbon dioxide and water vapor fluxes of winter wheat and tallgrass prairie ecosystems. *AGU fall meeting*, December 12-16, 2016, San Francisco, California, USA (Poster).

13. Wang, J., Xiao, X., Dong, J., Zhang, G., Zhang, Y., Zou, Z., **Zhou, Y.,** Wu, X., Bajgain, R. Mapping woody plant encroachment in grassland using multiple source remote sensing images: case study in Oklahoma. *AGU fall meeting*, December 14-18, 2015, San Francisco, California, USA (Poster).

12. Bajgain, R., Xiao, X., Basara, J., Wagle, P., **Zhou, Y.,** Zhang, G., Mahan, H. Assessing summer drought over Oklahoma Mesonet sites with the MODIS land surface water index. *AGU fall meeting*, December 14-18, 2015, San Francisco, California, USA (Poster).

11. **Zhou, Y.,** Xiao, X., Zhang, G., Bajgain, R., Dong, J., Qin, Y., Jin, C., Wagle, P., Basara, J., McCarthy, H., Anderson, M., Hain, C., Otkin, J. Spatial-temporal dynamics of agricultural drought in the tallgrass prairie region of the Southern Great Plains during 2000-2013. *AGU fall meeting*, December 14-18, 2015, San Francisco, California, USA (Poster).

10. **Zhou, Y.,** Xiao, X., Zhang, G., Wagle, P., Bajgain, R., Basara, J., Jin, C., Dong, J. Agriculture drought in tallgrass prairie of the Southern Great Plains and its impact on beef cattle production. *Society of Environmental Journalists (SEJ) 25th Annual Conference*, October 7-11, 2015, Norman, Oklahoma, USA (Poster).

9. **Zhou, Y.,** Xiao, X., Zhang, G., Wagle, P., Bajgain, R., Basara, J., Jin, C., Dong, J. Spatial-temporal dynamics of severe agricultural drought in tallgrass prairie of the Southern Great Plaints during 2000-2013. *Year 3 Grazing CAP Annual Meeting*, March 18-19, 2015, Norman, Oklahoma, USA (Poster).

8. **Zhou, Y.,** Xiao, X., Zhang, G., Wagle, P., Bajgain, R., Basara, J. Mapping the duration and severity of drought impacts on grasslands in the Southern Great Plains through a water-related vegetation index derived from MODIS imagery. *AGU fall meeting,* December 15-19, 2014, San Francisco, California, USA (Poster).

7. Xiao, X., Zhang, G., Dong, J., Menarguez, M., Kou, W., Jin, C., Qin, Y., **Zhou, Y.,** Wang, J., Moore, B. Annual changes of paddy rice planting areas in Northeastern Asia from MODIS images in 2000-2014. *AGU fall meeting,* December 15-19, 2014, San Francisco, California, USA (Poster).

6. Mahan, H., Wagle, P., Bajgain, R., **Zhou, Y**., Basara, J., Xiao, X., Duckles, J., Steiner, J., Starks, P., Northup, B. Integrated cropland and grassland flux tower observation sites over grazinglands for quantifying surface-atmosphere exchange. *AGU fall meeting,* December 15-19, 2014, San Francisco, California, USA (Poster).

5. Dong, J., Xiao, X., Kou, W., Qin, Y., Wang, J., Zhang, G., Jin, C., **Zhou, Y.** Menarguez, M., Moore, B., Changes of paddy rice planting areas in Northeastern Asia from 1986 to 2014 based on Landsat data. *AGU fall meeting,* December 15-19, 2014, San Francisco, California, USA (Oral).

4. **Zhou, Y.,** Xiao, X., Zhang, G., Wagle, P., Bajgain, R., Basara, J., Cui, J. Mapping the duration and severity of drought impacts on grasslands in the Southern Great Plains through a water-related vegetation index derived from MODIS imagery. *GIS Day at the University of Oklahoma*. November 13, 2014*,* Norman, Oklahoma, USA (Poster).

3. Xiao, X., Basara, J., Steiner, J., Coleman, S., Duckles, J., Wagle, P., Northup, B., **Zhou, Y.,** Bajgain, R. Integrated grassland observation sites and integrated cropland observation sites at El Reno, Oklahoma. *Oklahoma NSF EPSCoR Climate Variability Researcher Conference*, April 10, 2014, Norman, Oklahoma, USA (Poster).

2. **Zhou, Y.,** Xiao, X. Data collection for El Reno and Green Valley Farm. *The Second Modeling and LCA meeting for the USDA NIFA Beef Cattle Project,* February 11-12, 2014, Stephenville, Texas, USA (Oral).

1. **Zhou, Y.,** Xiao, X. Mapping natural wetlands and paddy rice in Panjin, Northeastern China, using multi-temporal Landsat 8 images. *GIS Day at the University of Oklahoma*. November 20, 2013*,* Norman, Oklahoma, USA (Poster).

**Professional training and workshop attended**

23. Using Google Earth Engine for Land Monitoring Applications, NASA’s Applied Remote Sensing Training Program, Online, June 16, 23, & 30, 2021

22. Mapping with Drones, Virginia Tech, Online, April 27-29, 2021

21. Hyperspectral Data for Land and Coastal Systems, NASA’s Applied Remote Sensing Training Program, Online, Jan 19, 26, & Feb 2, 2021

20. Tutorial on Machine Learning and Deep Learning for the Environmental and Geosciences, Online, December 15, 2020

19. AGU fall meeting, Online, December 1-17, 2020

18. College of Arts and Sciences Grant Writing Workshop Series, Oklahoma State University, Spring 2020

17. AGU fall meeting, San Francisco, California, USA, December 9-13, 2019

16. Write Winning Grant Proposals Workshop, Oklahoma State University, Stillwater, Oklahoma, USA. September 18, 2019

15. AGU fall meeting, Washington D.C., USA. December 10-14, 2018

14. 4th Annual LTAR (Long-Term Agroecosystem Research) Conference, El Reno, Oklahoma, USA, April 24-26, 2018

13. AGU fall meeting, New Orleans, Louisiana, USA. December 11-15, 2017

12. Year 5 Grazing CAP (Resilience and vulnerability of beef cattle production in the Southern Great Plains under changing climate, land use and markets) Annual Meeting, Norman, Oklahoma, USA, June 20-21, 2017

11. AGU fall meeting, San Francisco, California, USA. December 12-16, 2016

10. AGU fall meeting, San Francisco, California, USA. December 14-18, 2015

9. Eddy Covariance Training Course at LI-COR, Lincoln, Nebraska, USA. August 18-20, 2015

8. The 2015 Workshop at MOISST (Marena, Oklahoma In Situ Sensor Testbed): The Dawn of the Soil Moisture Information Age? Stillwater, Oklahoma, USA, June 2-3, 2015

7. AGU fall meeting, San Francisco, California, USA. December 15-19, 2014

6. The 2014 Workshop at MOISST: Advancing Soil Moisture Science and Applications. June 4-5, 2014, Stillwater, Oklahoma, USA.

5. The Second Annual Meeting of Grazing CAP, Ardmore, Oklahoma, March 10-11, 2014

4. AGU fall meeting, San Francisco, California, USA. December 9-13, 2013

3. Annual Workshop on Geospatial Science, Technologies and Applications *Theme in 2013: Lands Cover and Land Use Changes*, Norman, Oklahoma, USA. November 21, 2013

2. Oklahoma Supercomputing Symposium 2013, Norman, Oklahoma, USA. October 1-2, 2013

1. The First Modeling Workshop for the USDA NIFA Beef Cattle Project, Norman, Oklahoma, USA. August 27-28, 2013

**Professional Memberships**

2013 - Present American Geographical Union (AGU)

**Professional Services and Activities**

2022 Editorial Board, *Chinese Geographical Science*

2021 Chair, session titled “Characterizing Land-Cover Change and Associated Ecosystem/Climate Responses Using Remote-Sensing Data (B035D)” in *American Geographical Union (AGU) fall meeting*

2020 Guest Editor, special issue "Remote Sensing in Assessing Responses of Vegetation to Drought" in *Remote Sensing*

2020 Chair, session titled “Remote Sensing–Based Monitoring of Forage Production and Quality (B036)” in *American Geographical Union (AGU) fall meeting*

2019 Chair, session titled “Assessing the Impacts of Climate Variability and Human Activities on Grasslands using Multi-source Data (B018)” in *American Geographical Union (AGU) fall meeting*

2018 Chair, session titled “Use Remote Sensing and Eddy Covariance Techniques to Quantify the Impacts of Climate and Managements on Grassland (B33H)” in *American Geographical Union (AGU) fall meeting*

2015 Student Liaison, *GIS Day at the University of Oklahoma*

2014 Student Liaison, *GIS Day at the University of Oklahoma*

**Professional Skills**

**Computer languages:** Python, R, and C++.

**Software:** ArcGIS, QGIS, ENVI/IDL, Google Earth Engine, and FRAGSTATS.

**Field observation:**Unmanned Aerial Systems (UAS);Spectroradiometer (ASD and PSR+), LAI, eddy covariance, PhenoCam, chlorophyll meter, canopy coverage, aboveground biomass, soil moisture etc.

**Certificates**

2018 Remote Pilot certificate (CFR Part 107) Federal Aviation Administration

**Honors and Awards**

2020 Summer Research and Supplemental Travel (ASR +1) award, College of Arts and Sciences, Oklahoma State University, Stillwater, Oklahoma

2015 Robberson Conference Presentation and Creative Exhibition Travel Grant, University of Oklahoma, Norman, Oklahoma.

**Peer Reviewer for Academic Journals**

*Advances in Space Research (1)*

*Agronomy (1)*

*Big Earth Data (1)*

*Ecological Engineering (1)*

*Ecology and Evolution (1)*

*Ecological Applications (2)*

*Grass and Forage Science (4)*

*International Journal of Remote Sensing (1)*

*ISPRS Journal of Photogrammetry and Remote Sensing (5)*

*Journal of Environmental Management (2)*

*Journal of Irrigation and Drainage Engineering (1)*

*Land Degradation & Development (4)*

*Physics and Chemistry of the Earth (1)*

*Remote Sensing (4)*

*Remote Sensing Letters (1)*

*Science of the Total Environment (4)*

*Soil Biology and Biochemistry (1)*

*Sustainability (1)*

*Water (1)*