Chunyuan Diao

Department of Geography & Geographic Information Science
University of Illinois at Urbana-Champaign
2034 Natural History Building
1301 W Green St
Urbana, IL 61801
Email: chunyuan@illinois.edu
Website: https://diaorssilab.web.illinois.edu/

EDUCATION

2017	Ph.D.	**Geography, State University of New York at Buffalo**
2014	M.A.	**Biostatistics, State University of New York at Buffalo**
2010	B.S.	**Resources Science and Engineering, Beijing Normal University**

PROFESSIONAL APPOINTMENTS

2022-present	**Research Associate,** Taylor Geospatial Institute
2017-present	**Assistant Professor,** Department of Geography and GIScience, UIUC
2017-present	**Founding Director,** Remote Sensing Space-Time Innovation (RSSI) Lab, UIUC
2014-2016	**Research Assistant,** Department of Urban and Regional Planning, State University of New York at Buffalo
2010-2014	**Teaching Assistant,** Department of Geography, State University of New York at Buffalo

RESEARCH INTERESTS

- Time series remote sensing, space-time analytics
- Vegetation phenology, continuous vegetation monitoring
- Computational remote sensing, deep learning
- Agriculture, forest, and invasive species dynamics

HONORS AND AWARDS

2023	**Early/Mid-Career Research Award,** University Consortium for Geographic Information Science (UCGIS).
2023	**Teacher Ranked as Excellent,** Center for Teaching Excellence, University of Illinois at Urbana-Champaign.
2022	**CPGIS Young Scholar Award,** International Association of Chinese Professionals in Geographic Information Sciences.
2021	**NSF CAREER Award,** National Science Foundation.

2021	**NASA Early Career Investigator Award,** National Aeronautics and Space Administration.
2020	**Early Career Scholars in Remote Sensing Award,** Remote Sensing Specialty Group, Association of American Geographers.
2019	**AI for Earth Award,** Microsoft.
2018	**NSF Blue Waters Broadening Participation Allocation Award,** National Center for Supercomputing Applications.
2018	**Arnold O. Beckman Research Award,** University of Illinois at Urbana-Champaign.
2018-2019	**Teacher Ranked as Excellent,** Center for Teaching Excellence, University of Illinois at Urbana-Champaign.
2017	**Robert N. Colwell Memorial Fellowship,** American Society for Photogrammetric Engineering and Remote Sensing (ASPRS).
2017	**People's Choice Award of Poster Competition,** University Consortium for Geographic Information Science (UCGIS).
2017	**NSF Travel Award,** University Consortium for Geographic Information Science (UCGIS) Symposium and Summer School.
2016	**Mark Diamond Research Foundation Grant Award,** State University of New York at Buffalo.
2015	**DigitalGlobe Foundation Award for the Application of High-Resolution Digital Satellite Imagery,** American Society for Photogrammetric Engineering and Remote Sensing (ASPRS).
2015	**ASPRS Student of the Year Award,** Central New York Region of ASPRS.
2015-2017	**Graduate School Conference Travel Grant,** State University of New York at Buffalo.
2013	**Student Honors Paper Competition Award,** Remote Sensing Specialty Group, Annual Meeting of the Association of American Geographers.
2013	**Retention Award,** State University of New York at Buffalo.
2012	**UNESCO Chair Young Scholar Summit Student Paper Award**, UNESCO Chair in Hydroinformatics and Ecohydrology, Capital Normal University, Beijing, China.
2010-2014	**Dean's Scholarship,** State University of New York at Buffalo.

PUBLICATIONS (underline denotes student advisees; £ denotes the corresponding author)

- Yang, Z., **Diao, C**.£ and F. Gao (Under review). EMET: A emergence-based thermal phenological framework for near real-time crop type mapping.
- **Diao, C.**£, Augspurger, C., Zhao, Y., and C. Salk (Under review). A satellite-field phenological bridging framework for characterizing community-level spring forest phenology using multi-scale satellite imagery.
- Zhang, C. and **C. Diao** £. (2023). A Phenology-guided Bayesian-CNN (PB-CNN) framework for

soybean yield estimation and uncertainty analysis. *ISPRS Journal of Photogrammetry and Remote Sensing*, 205, 50-73. https://doi.org/10.1016/j.isprsjprs.2023.09.025

- Zhao, Y., **Diao, C.** £, Augspurger, C. and Z. Yang. (2023). Monitoring spring leaf phenology of individual trees in a temperate forest fragment with multi-scale satellite time series. *Remote Sensing of Environment*, 297, 113790. https://doi.org/10.1016/j.rse.2023.113790
- Liu, Y., **Diao, C.** £ and Z. Yang. (2023). CropSow: an integrative remotely sensed crop modeling framework for field-level crop planting date estimation. *ISPRS Journal of Photogrammetry and Remote Sensing*, 202, 334-355. https://doi.org/10.1016/j.isprsjprs.2023.06.012.
- Yang, Z., **Diao, C.** £ and F. Gao. (2023). Towards scalable within-season crop mapping with phenology normalization and deep learning. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 16, 1390-1402. https://doi.org/10.1109/JSTARS.2023.3237500
- **Diao, C.** £, and G. Li. (2022). Near-surface and high-resolution satellite time series for detecting crop phenology. *Remote Sensing*, 14(9), 1957. https://doi.org/10.3390/rs14091957
- Kang, B. and **C. Diao.** (2022). Walking school bus program feasibility in a suburban setting. *Journal of Planning Education and Research*. 42(3), 365-374. https://doi.org/10.1177/0739456X18817353
- Li, X., Tian, J., Li, X., Wang, L., Gong, H., Shi, C., Nie, S., Zhu, L., Chen, B., Pan, Y., He, J., Ni, R., and **C. Diao** £. (2022). Developing a sub-meter phenological spectral feature for mapping Poplars and Willows in urban environment. *ISPRS Journal of Photogrammetry and Remote Sensing*, 193, 77-89. https://doi.org/10.1016/j.isprsjprs.2022.09.002
- **Diao, C.** £, Yang, Z., Gao, F., Zhang, X., and Z. Yang. (2021). Hybrid phenology matching model for robust crop phenological retrieval. *ISPRS Journal of Photogrammetry and Remote Sensing*, 181, 308-326. https://doi.org/10.1016/j.isprsjprs.2021.09.011
- Yang, Z., **Diao, C.** £ and B. Li. (2021). A robust hybrid deep learning model for spatiotemporal image fusion. *Remote Sensing*, 13(24), 5005. https://doi.org/10.3390/rs13245005
- Gao, F., Anderson, M.C., Johnson, D.M., Seffrin, R., Wardlow, B., Suyker, A., **Diao, C.** and D.M. Browning. (2021). Towards routine mapping of crop emergence within the season using the harmonized Landsat and Sentinel-2 dataset. *Remote Sensing*, 13(24), 5074. https://doi.org/10.3390/rs13245074
- Lv, X., Shao, Z., Ming, D., **Diao, C.,** Zhou, K., and C. Tong. (2021). Improved object-based convolutional neural network (IOCNN) to classify very high-resolution remote sensing images. *International Journal of Remote Sensing*, 42, 8318-8344. https://doi.org/10.1080/01431161.2021.1951879
- **Diao, C.** £ (2020). Remote sensing phenological monitoring framework to characterize corn and soybean physiological growing stages. *Remote Sensing of Environment*, 248, 111960. https://doi.org/10.1016/j.rse.2020.111960
- Wang, L., **Diao, C.**, Xian, G., Yin, D., Lu, Y., Zou, S., and T.A. Erickson. (2020). A summary of the special issue on remote sensing of land change science with Google earth engine. *Remote Sensing of Environment*, 248, 112002. https://doi.org/10.1016/j.rse.2020.112002
- Tian, J., Wang, L., Yin, D., Li, X., **Diao, C.,** Gong, H., Shi, C., Menenti, M., Ge, Y., Nie, S., Ou, Y, Song, X. and X. Liu. (2020). Development of spectral-phenological features for deep learning to understand *Spartina alterniflora* invasion. *Remote Sensing of Environment*, 242, 111745. https://doi.org/10.1016/j.rse.2020.111745
- **Diao, C.** £ (2019). Complex network-based time series remote sensing model in monitoring the fall

foliage transition date for peak coloration. *Remote Sensing of Environment*, 229, 179-192. https://doi.org/10.1016/j.rse.2019.05.003

- **Diao, C.** [£] (2019). Innovative pheno-network model in estimating crop phenological stages with satellite time series. *ISPRS Journal of Photogrammetry and Remote Sensing*, 153, 96-109. https://doi.org/10.1016/j.isprsjprs.2019.04.012
- Shao, Z., Pan, Y., **Diao, C.**, and J. Cai. (2019). Cloud detection in remote sensing images based on multiscale features-convolutional neural network. *IEEE Transactions on Geoscience and Remote Sensing.* 1-15. https://doi.org/10.1109/TGRS.2018.2889677
- **Diao, C.** and L. Wang. (2018). Landsat time series-based multiyear spectral angle clustering (MSAC) model to monitor the inter-annual leaf senescence of exotic saltcedar. *Remote Sensing of Environment*, 209, 581-593. https://doi.org/10.1016/j.rse.2018.02.036
- Zhou, L., Wu, J., Mo, X., Zhou, H., **Diao, C.**, Wang, Q., Chen, Y., and F. Zhang. (2017). Quantitative and detailed spatiotemporal patterns of drought in China during 2001-2013. *Science of the Total Environment*, 589, 136-145. https://doi.org/10.1016/j.scitotenv.2017.02.202
- **Diao, C.** and L. Wang. (2016). Incorporating plant phenological trajectory in exotic saltcedar detection with monthly time series of Landsat imagery. *Remote Sensing of Environment*, 182, 60-71. https://doi.org/10.1016/j.rse.2016.04.029
- **Diao, C.** and L. Wang. (2016). Temporal partial unmixing of exotic saltcedar using Landsat time series. *Remote Sensing Letters*, 7(5), 466-475. https://doi.org/10.1080/2150704X.2016.1149250
- Yoo, E.-H., Chen, D., **Diao, C.**, and C. Russell. (2016). The effects of weather and environmental factors on West Nile virus mosquito abundance in Greater Toronto Area. *Earth Interactions*, 20, 1-22. https://doi.org/10.1175/EI-D-15-0003.1
- Wang, L., Shi, C., **Diao, C.**, Ji, W., and D. Yin. (2016). A survey of methods incorporating spatial information in image classification and spectral unmixing. *International Journal of Remote Sensing*, 37(16), 3870-3910. https://doi.org/10.1080/01431161.2016.1204032
- Zhou, W., Shao, Z., **Diao, C.**, and Q. Cheng. (2015). High-resolution remote-sensing imagery retrieval using sparse features by auto-encoder. *Remote Sensing Letters*, 6(10), 775-783. https://doi.org/10.1080/2150704X.2015.1074756
- Zhang, L., Shao, Z., and **C. Diao.** (2015). Synergistic retrieval model of forest biomass using the integration of optical and microwave remote sensing. *Journal of Applied Remote Sensing*, 9(1), 096069. https://doi.org/10.1117/1.JRS.9.096069
- Shao, Z., Zhou, W., Cheng, Q., **Diao, C.**, and L. Zhang. (2015). An effective hyperspectral image retrieval method using integrated spectral and textural features. *Sensor Review*, 35(3), 274-281. https://doi.org/10.1108/SR-10-2014-0716
- **Diao, C.** and L. Wang. (2014). Development of an invasive species distribution model with fine-resolution remote sensing. *International Journal of Applied Earth Observation and Geoinformation*, 30, 65-75. https://doi.org/10.1016/j.jag.2014.01.015
- Wu, J., Zhou, L., Liu, M., Zhang, J., Leng, S., and **C. Diao.** (2013). Establishing and assessing the Integrated Surface Drought Index (ISDI) for agricultural drought monitoring in mid-eastern China. *International Journal of Applied Earth Observation and Geoinformation*, 23, 397-410. https://doi.org/10.1016/j.jag.2012.11.003

EDITED BOOKS, SPECIAL ISSUES AND PROCEEDINGS

- Jin, X., McCabe, M., **Diao, C.**, Li, Z., and D. Yin, eds. (2023). *Remote Sensing Application for Precision Agriculture, 2nd Edition.* Lausanne: Frontiers Media SA. https://doi.org/10.3389/978-2-8325-3182-2

BOOK CHAPTERS (underline denotes student advisees; £ denotes the corresponding author)

- Zhang, C., **Diao, C.** £ and T. Guo. (In press). GeoAI for agriculture, in eds. Gao, S., Hu, Y. & Li, W. *Handbook of Geospatial Artificial Intelligence (GeoAI)*, CRC Press/Taylor & Francis Group.
- Wang, L. and **C. Diao** (2013). Automated individual tree-crown delineation and treetop detection with very-high-resolution aerial imagery, in eds. Wang, G. & Weng, Q. *Remote Sensing of Natural Resources*, CRC Press. https://doi.org/10.1201/b15159

PEER-REVIEWED CONFERENCE PROCEEDINGS (underline denotes student advisees; £ denotes the corresponding author)

- Lyu, F., Yang, Z., Xiao, Z., **Diao, C.** £, Park, J., and S. Wang. (2022). CyberGIS for scalable remote sensing data fusion. In, *Practice and Experience in Advanced Research Computing* (pp. 1-4). https://doi.org/10.1145/3491418.3535145
- Zhou, L., Wu, J., Leng, S., Liu, M., Zhang, J., Zhao, L., **Diao, C.**, Zhang, J., Luo, H., Zhang, F., and Y. Shi. (2012). Using a new integrated drought monitoring index to improve drought detection in mid-eastern China. In, *Geoscience and Remote Sensing Symposium (IGARSS), 2012 IEEE International* (pp. 883-886): IEEE. https://doi.org/10.1109/IGARSS.2012.6351417

TEACHING EXPERIENCE

GGIS 595 – Graduate Seminar - Advanced Remote Sensing (UIUC) S23
Developed seminar materials for introducing some of the most innovative advances in remote sensing with a variety of topics in biogeography, geospatial analysis, environmental studies, land use/land cover change, and urban studies.

GGIS 489 – Programming for GIS (UIUC) S19, S20, S23
Developed lecture and lab materials for introducing the principles of programming, spatial data structures and algorithms, and programming applications in geospatial science.

GGIS 478 - Techniques of Remote Sensing (UIUC) S18, S20, S22
Developed lecture and lab materials for introducing the techniques of digital image interpretation and processing in remote sensing applications.

GGIS 477 - Introduction to Remote Sensing (UIUC) F17, S19, F19, S21, F21, F22, F23
Developed lecture and lab materials for introducing the principles and applications of remote sensing in a wide range of disciplines.

GEO 411- Multivariate Statistics in Geography (State University of New York at Buffalo) S14
Designed and taught all class materials for an undergraduate-level lecture course focused on introducing the theoretical concepts and applications of multivariate statistical techniques in geography.

RESEARCH EXPERIENCE

2014-2016 Research Assistant (State University of New York at Buffalo). United States Department of Transportation (USDOT) funded project: *Active commuting in the sweet home central school district.*

2013 Research Assistant (State University of New York at Buffalo). University Transportation Research Center funded project: *A GIS-based performance measurement system for assessing transportation sustainability and community livability.*

2010-2013 Research Assistant (State University of New York at Buffalo). United States Department of Agriculture (USDA) funded project: *Assessment, monitoring and prediction of the spatial invasion of saltcedar in the lower Rio Grande using multi-resolution and multi-temporal remotely sensed imagery.*

CONFERENCE PRESENTATIONS (underline denotes student advisees)

Diao, C., Yang, Z., Liu, Y., Zhang, C. and T. Guo. Towards large-scale crop phenological characterization using multi-scale satellite time series. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA, December 11-December 15, 2023. (Invited Talk).

Yang, Z. and **C. Diao**. EMET: A emergence-based thermal phenological framework for near real-time crop type mapping. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA, December 11-December 15, 2023.

Zhang, C. and **C. Diao**. Enhancing crop yield prediction across regions with phenology-based domain adaptation: a meta-learned conditional adversarial approach. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA, December 11-December 15, 2023.

Zhao, Y. and **C. Diao**. Large-scale detection of invasive saltcedar defoliation timing of Colorado River in Arizona using dense landsat time series. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA, December 11-December 15, 2023.

Yang, Z. and **C. Diao**. A novel deep learning framework for within-season field-level crop phenology characterization. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA, December 11-December 15, 2023.

Liu, Y., **Diao, C.**, Mei, W. and C. Zhang. CropSight: an operational framework for crop type information retrieval using street view and PlanetScope satellite images. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA, December 11-December 15, 2023.

Guo, T., **Diao, C.**, Zhang, C., Liu, Y. and Z. Yang. Towards scalable field-level crop yield estimation through integration of crop model and deep learning. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA, December 11-December 15, 2023.

Diao, C., Yang, Z., Gao, F., Zhang, X., Yang, Z., and G. Li. Remotely sensed hybrid phenology matching model to estimate crop growing stages. *NASA Carbon Cycle & Ecosystems Joint Science Workshop,* College Park, MD. May 8-May 12, 2023.

Zhao, Y. and **C. Diao**. Detect saltcedar defoliation timing at Colorado River in Arizona using dense Landsat time series. *NASA Carbon Cycle & Ecosystems Joint Science Workshop,* College Park, MD. May 8-May 12, 2023.

Yang, Z., **Diao, C.,** and F. Gao. A novel phenology guided deep learning model for within-season field-level crop mapping. *NASA Carbon Cycle & Ecosystems Joint Science Workshop,* College Park, MD. May 8-May 12, 2023.

Diao, C. Development of large-scale crop phenological characterization framework with satellite time series. *Annual Meeting of the Association of American Geographers (AAG),* Denver, CO. March 23-March 27, 2023.

Guo, T. and **C. Diao**. Towards scalable field-level crop yield estimation through integration of crop model and deep learning. *Annual Meeting of the Association of American Geographers (AAG),* Denver, CO. March 23-March 27, 2023. (Student Honors Paper Competition Award).

Zhao, Y. and **C. Diao**. Detect Tamarix defoliation and vegetation regrowth timing with the COntinuous monitoring of Land Disturbance (COLD) model. *Annual Meeting of the Association of American Geographers (AAG),* Denver, CO. March 23-March 27, 2023.

Yang, Z. and **C. Diao**. Within-season crop mapping at the field level using a phenology-guided deep learning model. *Annual Meeting of the Association of American Geographers (AAG),* Denver, CO. March 23-March 27, 2023.

Zhang, C., **Diao, C.**, Bullock, D., Li, X., and T. Mieno. Economic evaluation of site-specific nitrogen management using extended Geographically Weighted Regression (GWR) analysis. *Data-Intensive Farm Management Annual Meeting,* Corpus Christi, TX. January 4-January 6, 2023.

Diao, C. and G. Li. Monitoring crop phenology with near-surface and high-resolution satellite time series. *American Geophysical Union (AGU) Fall Meeting,* Chicago, IL, December 12-December 16, 2022.

Zhang, C. and **C. Diao**. A novel phenology-guided Bayesian-CNN framework for crop yield estimation. *American Geophysical Union (AGU) Fall Meeting,* Chicago, IL, December 12-December 16, 2022.

Zhao, Y., **Diao, C.**, Augspurger, C., and Z. Yang. Monitoring spring leaf phenology of individual trees in a temperate forest fragment with multi-scale satellite time series. *American Geophysical Union (AGU) Fall Meeting,* Chicago, IL, December 12-December 16, 2022.

Liu, Y., **Diao, C.**, Yang, Z., and E. Nafziger. CropSow: an integrative remotely sensed crop modeling framework for field-level crop planting data estimation. *American Geophysical Union (AGU) Fall Meeting,* Chicago, IL, December 12-December 16, 2022.

Yang, Z., **Diao, C.**, and F. Gao. A novel phenology guided deep learning model for within-season field-level crop mapping. *American Geophysical Union (AGU) Fall Meeting,* Chicago, IL, December 12-December 16, 2022.

Lyu, F., Yang, Z., Xiao, Z., **Diao, C.**, Park, J., and S. Wang. CyberGIS for scalable remote sensing data fusion. *Practice and Experience in Advanced Research Computing (PEARC22)*, Boston, MA. July 10 – July 14, 2022.

Diao, C. Towards remote sensing modeling framework for crop phenological characterization. *Annual Meeting of the Association of American Geographers (AAG),* New York City, NY. February 25-March 1, 2022.

Zhang, C. and **C. Diao.** County-level soybean yield estimation based on Bayesian-CNN incorporating phenology dynamic. *Annual Meeting of the Association of American Geographers (AAG),* New York City, NY. February 25-March 1, 2022. (Student Honors Paper Competition Award).

Zhao, Y. and **C. Diao.** Monitoring leaf phenology of tree individuals in a temperate forest of a fragmented landscape with PlanetScope data. *Annual Meeting of the Association of American Geographers (AAG),* New York City, NY. February 25-March 1, 2022.

Yang, Z. and **C. Diao.** A phenology-guided deep learning model for early crop mapping at the field level. *Annual Meeting of the Association of American Geographers (AAG),* New York City, NY. February 25-March 1, 2022.

Liu, Y. and **C. Diao.** CropSow: a novel modeling framework to estimate field-level crop sowing date with multi-scale satellite time series. *Annual Meeting of the Association of American Geographers (AAG),* New York City, NY. February 25-March 1, 2022. (Student Illustrated Paper Competition Award).

Zhang, C. and **C. Diao.** A new Probabilistic Bayesian-CNN (PB-CNN) method incorporating phenology dynamic for crop yield estimation. *Data-Intensive Farm Management Annual Meeting,* Corpus Christi, TX. January 6-January 8, 2022.

Diao, C., Yang, Z., Gao, F., Zhang, X. and Z. Yang. A novel hybrid phenology matching model for robust crop growth stage characterization. *American Geophysical Union (AGU) Fall Meeting,* New Orleans, LA, December 13-December 17, 2021.

Diao, C. and Z. Yang. Retrieval of crop growing progress with remote sensing and phenology-matching models. *Annual Meeting of the Association of American Geographers (AAG),* Seattle, WA. April 7-April 11, 2021.

Li, G. and **C. Diao.** Fine-scale crop phenological monitoring with near-surface remote sensing and high-resolution satellite time series. *Annual Meeting of the Association of American Geographers (AAG),* Seattle, WA. April 7-April 11, 2021.

Yang, Z. and **C. Diao.** A novel deep learning-based phenology matching model for characterizing crop phenological stages with fused high spatio-temporal resolution imagery. *Annual Meeting of the Association of American Geographers (AAG),* Seattle, WA. April 7-April 11, 2021.

Zhao, Y. and **C. Diao.** Monitoring multi-level forest phenology with time series satellite imagery. *Annual Meeting of the Association of American Geographers (AAG),* Seattle, WA. April 7-April 11, 2021. (Student Honors Paper Competition Award).

Zhang, C. and **C. Diao.** The hybrid CNN-LSTM model for county-level yield prediction using satellite images. *Annual Meeting of the Association of American Geographers (AAG),* Seattle, WA. April 7-April 11, 2021.

Diao, C. and Z. Yang. An innovative phenology-matching model to estimate crop growing stages. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA. December 7-December 11, 2020.

Diao, C. Large-scale operational framework to characterize crop phenological stages with satellite time series. *Annual Meeting of the Association of American Geographers (AAG),* Denver, CO, April 6-April 10, 2020.

Yang, Z. and **C. Diao.** A robust hybrid deep learning modeling framework for spatiotemporal image fusion. *Annual Meeting of the Association of American Geographers (AAG),* Denver, CO, April 6-April 10, 2020. (Student Honors Paper Competition Award).

Li, G. and **C. Diao.** Fine-scale crop phenological monitoring with near-surface remote sensing and high resolution satellite remote sensing time series. *Annual Meeting of the Association of American Geographers (AAG),* Denver, CO, April 6-April 10, 2020.

Diao, C. Integrated modeling framework to estimate crop phenological stages with satellite time series. *American Geophysical Union (AGU) Fall Meeting,* San Francisco, CA. December 9-December 13, 2019.

Jin, Z., Mui, Y., Baek, S., **Diao, C.**, Epstein, L. and S. Raja. It's not just the food environment: spatial analysis of household food retail shopping patterns in the Buffalo-Niagara metropolitan area. *Annual Conference of the Association of Collegiate Schools of Planning (ACSP),* Greenville, SC, October 24-27, 2019.

Diao, C. Continental-scale remote monitoring of invasive species dynamics through petascale high performance computing system. *NSF Blue Waters Symposium for Petascale Science and Beyond*, Sunriver, Oregon. June 3-June 6, 2019.

Diao, C. Innovative pheno-network model in characterizing the phenological process of vegetation. *Annual Meeting of the Association of American Geographers (AAG),* Washington, D.C. April 3-April 7, 2019.

Li, G. and **C. Diao.** Near-surface and high resolution satellite remote sensing time series for understanding crop phenological responses to climate change. *Annual Meeting of the Association of American Geographers (AAG),* Washington, D.C. April 3-April 7, 2019. (Student Illustrated Paper Competition Award).

Diao, C. Monitoring the leaf coloration of fall phenology through innovative models. *American Geophysical Union (AGU) Fall Meeting*, Washington, D.C. December 10-December 14, 2018.

Diao, C. and L. Wang. Phenology-guided composite image for monitoring invasive species using Landsat time series. *Annual Meeting of the Association of American Geographers (AAG),* New Orleans, LA, April 10-April 14, 2018.

Diao, C. and L. Wang. Incorporating spatiotemporal phenological variation in detecting exotic saltcedar using Landsat time series. *American Geophysical Union (AGU) Fall Meeting*, New Orleans, LA, December 11-December 15, 2017.

Diao, C. and L. Wang. Monitoring the inter-annual leaf senescence of exotic saltcedar using Landsat time series. *Annual Meeting of the Association of American Geographers (AAG),* Boston, MA, April 5-April 9, 2017.

Diao, C. and L. Wang. Landsat-based temporal mixture analysis for estimating invasive saltcedar abundance: A phenology-guided approach. *Annual Meeting of the Association of American Geographers (AAG),* San Francisco, CA, March 29-April 2, 2016.

Raja, S., Leccese, J. and **C. Diao.** Participatory action research to build local government capacity to strengthen food systems. *Enhancing Food Security in the Northeast with Regional Food Systems Conference (EFSNE),* Greenbelt, MD, December 10, 2015.

Raja, S., Khojasteh, M., Hodgson, K., Clark, J. and **C. Diao.** Over-regulation and under-investment: planners's response to communities' efforts to strengthen food systems. *Annual Conference of the Association of Collegiate Schools of Planning (ACSP),* Houston, TX, October 22-25, 2015.

Diao, C. and L. Wang. Mapping invasive saltcedar distribution with spectral and phenological measures from multi-seasonal Landsat imagery. *Annual Meeting of the Association of American Geographers (AAG),* Chicago, IL, April 21-25, 2015.

Diao, C. and L. Wang. Incorporation of spectral and phenological information in invasive saltcedar mapping with multi-temporal Landsat imagery. *Graduate Student Research Symposium,* State University of New York at Buffalo, Buffalo, NY, April 10, 2015.

Diao, C. and L. Wang. Development of an invasive species distribution model with fine-resolution remote sensing. *Annual Meeting of the Association of American Geographers (AAG),* Los Angeles, CA, April 9-13, 2013. (Student Honors Paper Competition Award).

Diao, C. and L. Wang. Developing a remote sensing-driven species distribution model: A study of invasive saltcedar (*Tamarix* spp.). *Graduate Student Research Symposium,* State University of New York at Buffalo, Buffalo, NY, April 5, 2013.

Diao, C. and L. Wang. Mapping the suitable habitats of saltcedar with Landsat TM imagery. *UNESCO Chair Young Scholar Summit*, Capital Normal University, Beijing, China, July 9, 2012.

Zhou, L., Wu, J., Leng, S., Liu, M., Zhang, J., Zhao, L., **Diao, C.,** Zhang, J., Luo, H., Zhang, F., and Y. Shi. Using a new integrated drought monitoring index to improve drought detection in mid-eastern China. *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, Munich, Germany, July 22-27, 2012.

Diao, C. and W. Zhao. Integrating GIS and remote sensing to update the new construction land pricing system in Zhejiang, China. *Research Symposium of Natural Resources*, Beijing Normal University, Beijing, China, 2009.

PROFESSIONAL ACTIVITIES AND SERVICE

2023-present	**Vice Chair**, Remote Sensing Specialty Group, Association of American Geographers.
2023-present	**Admissions Committee Member**, Department of Geography and GIScience, UIUC
2023	**Session Organizer and Chair,** *Advances in Agricultural Remote Sensing and Artificial Intelligence* (with Zijun Yang), Annual Meeting of the Association of American Geographers (AAG), Denver, CO. March 23-March 27, 2023.
2022-present	**Editorial Advisory Board,** ISPRS Journal of Photogrammetry and Remote Sensing.
2022-present	**Editorial Board,** Frontiers in Plant Science
2022-present	**Team Member,** NASA Biodiversity and Ecological Conservation
2022-present	**Faculty Member,** AGU Bridge Program
2022-present	**Proposal Reviewer,** UK Research and Innovation

2022-present	**Guest Editor,** *Remote Sensing Application for Precision Agriculture* (with Xiuliang Jin, Matthew McCabe and Zhenhai Li), Special Issue in Frontiers in Plant Science.
2022-present	**Advisory Committee Member**, Department of Geography and GIScience, UIUC
2022-present	**USGIF Accreditation Committee Member,** Department of Geography and GIScience, UIUC
2022-2023	**Colloquium Coordinator**, Department of Geography and GIScience, UIUC
2022	**Session Organizer and Co-Chair,** *Remote Sensing for Smart Agriculture* (with Dameng Yin, Qingzhi Liu, and Jinyan Tian), The 29th International Conference on Geoinformatics, Beijing, China. August 15-August 18, 2022.
2022	**Session Organizer and Chair,** *Advances in Agricultural Remote Sensing and Artificial Intelligence* (with Zijun Yang), Annual Meeting of the Association of American Geographers (AAG), New York City, NY. February 25-March 1, 2022.
2021-2023	**Director/Treasurer**, Remote Sensing Specialty Group, Association of American Geographers.
2021-2023	**Communication Coordinator**, Remote Sensing Specialty Group, Association of American Geographers.
2021-present	**GIScience Program Committee Chair**, Department of Geography and GIScience, UIUC
2021-present	**Future of IT Committee Member**, School of Earth, Society, and Environment, UIUC
2021-2022	**Search Committee Member**, Assistant Professor Position in Environmental GIS and Geospatial Data Science, Department of Geography and GIScience, UIUC
2021	**Session Organizer and Chair,** *Time Series Remote Sensing in Characterizing Land Surface Dynamics* (with Zijun Yang), Annual Meeting of the Association of American Geographers (AAG), Seattle, WA. April 7-April 11, 2021.
2020-present	**Editorial Board,** Frontiers in Remote Sensing
2020-present	**Guest Editor,** *Advancing Land Surface Phenological Analysis with High Spatial Resolution Imagery* (with Xiaoyang Zhang, Liang Liang and Rasmus Houborg), Special Issue in Remote Sensing.
2020-present	**Planet Data Allocation Committee Member**, UIUC
2020-2021	**Colloquium Coordinator**, Department of Geography and GIScience, UIUC
2020-2021	**Guest Editor,** *Time Series Remote Sensing for Land Surface Dynamics Monitoring* (with Xiaolin Zhu, Desheng Liu, Eileen Helmer, Li Zhuo, and David Gwenzi), Special Issue in IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing.
2020	**Session Organizer and Chair,** *Time Series Remote Sensing in Characterizing Long-term Land Surface Dynamics* (with Xiaoyang Zhang, Jin Chen, and Xiaolin Zhu), Annual Meeting of the Association of American Geographers (AAG), Denver, CO. April 6-April 10, 2020.

2019	**Session Organizer and Chair,** *Remote Sensing Time Series Analysis with Moderate Spatial Resolution Imagery* (with George Xian and Xiaoyang Zhang), Annual Meeting of the Association of American Geographers (AAG), Washington, D.C. April 3-April 7, 2019.
2019-2020	**Capricious Grading Committee Member**, Department of Geography and GIScience, UIUC
2019	**Award Committee Member,** Remote Sensing Specialty Group, Association of American Geographers.
2019	**Competition Judge,** Student Honors Paper Competition, Remote Sensing Specialty Group, Annual Meeting of the Association of American Geographers.
2018-2021	**Faculty Co-Director**, Remote Sensing Specialty Group, Association of American Geographers.
2018-2021	**Grievance Committee Member**, Department of Geography and GIScience, UIUC
2018-2021	**Guest Editor,** *Remote Sensing of Land Change Science with Google Earth Engine* (with Le Wang, George Xian, and David Thau), Special Issue in Remote Sensing of Environment.
2018-present	**Proposal Reviewer,** National Science Foundation
2018-present	**Proposal Reviewer,** Society of Woman Geographers Pruitt Grant Competition
2018	**Competition Judge,** Research Review Poster Competition, School of Earth Society and Environment, UIUC
2018	**Session Organizer and Chair,** *Student Illustrated Paper Competition*, Sponsored by Remote Sensing/Geographic Information Science and Systems Specialty Group, Annual Meeting of the Association of American Geographers (AAG), New Orleans, LA, April 10-April 14, 2018.
2018	**Session Organizer and Chair,** *Remote Sensing Time Series Analysis with Moderate Spatial Resolution Imagery* (with Zhe Zhu and Chengbin Deng), Annual Meeting of the Association of American Geographers (AAG), New Orleans, LA, April 10-April 14, 2018.
2017-2018	**Capricious Grading Committee Member**, Department of Geography and GIScience, UIUC
2017-2018	**Student Co-Director**, Remote Sensing Specialty Group, Association of American Geographers.
2015	**Proposal Reviewer**, Mark Diamond Research Foundation Grant, State University of New York at Buffalo.
2013-present	**Journal Reviewer** (over 100 times), Remote Sensing of Environment; ISPRS Journal of Photogrammetry and Remote Sensing; Nature Scientific Reports; IEEE Transactions on Geoscience and Remote Sensing; IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing; Earth System Science Data; Frontiers in Remote Sensing; International Journal of Applied Earth Observation and Geoinformation; Remote Sensing; Science of the Total Environment; Computers and Electronics in Agriculture; Earth Interactions; International Journal of Remote Sensing; Remote

Sensing Letters; IEEE Access; Ecological Informatics; Sensor Review; Geocarto International; Annals of GIS

PROFESSIONAL MEMBERSHIPS

Association of American Geographers (AAG)

American Society for Photogrammetry and Remote Sensing (ASPRS)

American Geophysical Union (AGU)

International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)