

Zhiying Li

O'Neill School of Public and Environmental Affairs, Indiana University Bloomington
418 MSB-II, 702 N. Walnut Grove Ave, Bloomington, IN, 47405-2204
E-mail: zl68@iu.edu; **Professional website:** zhiyingli-geo.com

ACADEMIC APPOINTMENTS

Aug 2023-present	Assistant Professor O'Neill School of Public and Environmental Affairs, Indiana University, Bloomington, IN, USA
Sept 2021-Jul 2023	Postdoctoral Research Associate Department of Geography, Dartmouth College, Hanover, NH, USA

EDUCATION

2021	Ph.D. in Geography Department of Geography, The Ohio State University, Columbus, OH, USA
2017	M.S. in Physical Geography Institute of Geographic Sciences and Natural Resources Research (IGSNRR), University of Chinese Academy of Sciences (UCAS), Beijing, China
2014	Bachelor of Agriculture in Soil and Water Conservation* College of Natural Resources and Environment, Northwest A&F University, Yangling, Shaanxi, China (* Included 1.5-month visiting student research assistantship at University of Nebraska-Lincoln, Lincoln, NE, USA)

PEER-REVIEWED PUBLICATIONS

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11. **Zhiying Li***, Jason E. Smerdon, Richard Seager, Noel Siebert, Justin S. Mankin. 2024. Emergent trends complicate the interpretation of the United States Drought Monitor (USDM). *AGU Advances* 5(2), e2023AV001070. doi: 10.1029/2023AV001070
(selected as AGU Research Spotlight on EoS.org; Media coverage at LA Times, NOAA/NIDIS News, Dartmouth News)
 10. Ning Zhang, **Zhiying Li* (co-first author)**, Steven M. Quiring. 2023. Developing impacts-based drought thresholds for Ohio. *Journal of Hydrometeorology* 24(7), 1225-1240. doi: 10.1175/JHM-D-22-0054.1
 9. **Zhiying Li***, Steven M. Quiring. 2022. Projection of streamflow change using a time-varying Budyko framework in the contiguous United States. *Water Resources Research* 58(10), e2022WR033016. doi: 10.1029/2022WR033016
 8. Tengfei Liu, **Zhiying Li**, Can Zhang, Qiu Xia*. 2022. How comprehensive innovation reform pilot improve urban green innovation efficiency? —evidence from China. *Sustainability* 14(8), 4550. doi: 10.3390/su14084550
 7. Jing Wu, Qiu Xia, **Zhiying Li***. 2022. Green innovation and enterprise green total factor

productivity at a micro level: A perspective of technical distance. *Journal of Cleaner Production* 344, 131070. doi: 10.1016/j.jclepro.2022.131070

6. **Zhiying Li***, Steven M. Quiring. 2021. Investigating spatial heterogeneity of the controls of surface water balance in the contiguous United States by considering anthropogenic factors. *Journal of Hydrology* 601, 126621. doi: 10.1016/j.jhydrol.2021.126621

5. **Zhiying Li***, Steven M. Quiring. 2021. Identifying the dominant drivers of hydrological change in the contiguous United States. *Water Resources Research* 57(5), e2021WR029738. doi: 10.1029/2021WR029738

4. Ning Zhang, **Zhiying Li***, Xun Zou, Steven M. Quiring. 2019. Comparison of three short-term load forecast models in southern California. *Energy* 189, 116358. doi: 10.1016/j.energy.2019.116358

3. **Zhiying Li***, Xiao Li, Yue Wang, Steven M. Quiring. 2019. Impact of climate change on precipitation patterns in Houston, Texas, USA. *Anthropocene* 25, 100193. doi: 10.1016/j.ancene.2019.100193

2. **Zhiying Li**, Haiyan Fang*. 2017. Modelling the impact of climate change on watershed discharge and sediment yield in the black soil region, northeastern China. *Geomorphology* 293(Part A), 255-271. doi: 10.1016/j.geomorph.2017.06.005

1. **Zhiying Li**, Haiyan Fang*. 2016. Impacts of climate change on water erosion: a review. *Earth-Science Reviews* 163, 94-117. doi: 10.1016/j.earscirev.2016.10.004

(*corresponding author)

RESEARCH GRANTS (external funders are underlined)

Funded

2024 **Investigator:** United States Geological Survey (USGS) Annual 104B Base Grant, Impacts of Drought-Flood Abrupt Alternation on Water Quality in Indiana (09/01/2024-08/31/2025, \$30,000)

2024 **Investigator:** IUB Faculty Assistance in Data Science Program (05/06/2024-08/15/2024, equivalent to \$3,000)

2024 **Investigator:** IUB Collaborative Research Award (05/2024-05/2026, \$10,000)

2023 **Co-Investigator:** Center for Global Health Studies (CGHS) within the U.S. National Institutes of Health (NIH), Quantifying the Impact of Flood Adaptation on Dengue Fever with Geospatial Analysis; with Meifang Li at Dartmouth College (PI) (01/2024-01/2025, \$15,000)

2023 **Investigator:** IUB Faculty Research Support Program – Seed Funding, Characteristics, Mechanisms, and Impacts of Hourly Extreme Precipitation in the Contiguous United States (05/07/2024-05/06/2025, \$49,705)

2020 **Co-Investigator:** National Science Foundation Doctoral Dissertation Research Improvement, Relative Importance of Drivers of River Discharge and Prediction of Flow Regimes across the United States (06/15/2020-11/30/2021, \$17,023); with Steven Quiring (PI); Li is Co-PI due to NSF-DDRI application regulations.

Unfunded

- 2023 **Investigator:** Sustainability Amazon Research Award in Climate Risk Assessment (07/2024-06/2025, \$105,833)
- 2023 **Investigator:** IUB Enhanced Mentoring Program with Opportunities for Ways to Excel in Research (EMPOWER; \$10,000)

TEACHING EXPERIENCE

Instructor

- Fall 2024 Environmental Sustainability Science (E555); IUB
- New core course for master's students in Env. Sus.
- Spring 2024, Spring 2025 Introduction to Environmental Science (E272); IUB
- Introductory course for undergraduates; GE course
 - 42 students enrolled

Lab Instructor

- Spring 2020, Fall 2019 Extreme Weather and Climate (G1900); 4 sessions; OSU
- Introductory course for undergraduates; GE course
 - 32 students enrolled

Graduate Teaching Assistant

- Spring 2019 Climatology (G5900), The Ohio State University
- Advanced course for undergraduates
 - 36 students enrolled
- Fall 2018 Global Climate Change (G3900), OSU
- Intermediate course for undergraduates
 - 69 students enrolled

Guest Lecturer

- Feb 2020 Boundary Layer Climate (G5921), OSU
- Advanced course for undergraduates
 - ~40 students enrolled

ADVISEES

Graduate Students

- Fall 2024-present Guoqing Gong, Ph.D. student in Environmental Science, chair
- Fall 2024-present Tian Yang, Ph.D. student in Environmental Science, chair
- Spring 2024 Qing Chang, Ph.D. candidate in Environmental Science, committee member

Undergraduate (U) & Graduate (G) Research Assistants

- Summer 2024 Sandeep Batta (G), M.S. in Data Science, IUB
- Summer 2024 Sai Ruthvik Reddy Mitta (G), M.S. in Data Science, IUB
- Summer 2024 Ashtavinayak Pande (G), M.S. in Data Science, IUB
- Spring 2024-present Ayesha Mulla (G), M.S. in Data Science, IUB
- Oct 2023-Mar 2024 Romany Tafid (G), M.S. in Environmental Science, IUB
- Fall 2020-Spring 2021 Ruixuan Ding (U), B.S. in Geography, OSU

AWARDS AND HONORS

- 2023 Selected Climate Change & Society Cohort for the “Elevate the Discipline” Program by the American Association of Geographers (AAG), Washington D.C.
- 2022 Excellent Oral Presentation at the “Young Scientist Forum” Session at the 2022 International Forum on Big Data for Sustainable Development Goals
- 2022 Travel Grant for the Community Earth System Model (CESM) tutorial, Center Green, University Corporation for Atmospheric Research (UCAR), Boulder, CO (~\$1,000)
- 2021 The Story Exchange “Our Women in Science Incentive Prize” (\$5,000)
- 2021 Chinese Government Award for Outstanding Self-financed Students Abroad (\$6,000)
- 2021 The E. Willard & Ruby S. Miller Fellowship, Department of Geography at The Ohio State University (\$4,000)
- 2021 The 1st place poster presentation award in Mathematical and Physical Sciences at the Edward F. Hayes Graduate Research Forum (\$200)
- 2020 The 2nd place student poster presentation award at the 2020 Annual Water Management Association of Ohio Conference (\$100)
- 2020 The 1st place PhD student paper presentation award at the 2020 East Lakes Division of the American Association of Geographers (\$125)
- 2020 American Association of Geographers (AAG) Annual Meeting Student Grant
- 2020 Best Oral Presentation at the 4th annual Midwest Student Conference on Atmospheric Research
- 2019 Graduate School Presidential Fellowship, The Ohio State University (\$32,100)
- 2019 American Meteorological Society (AMS) Annual Meeting Matthew J. Parker Travel Grant (~\$1,400)
- 2019 Rick Toracinta Graduate Scholarship, The Ohio State University (\$2,000)
- 2017 Graduate School University Fellowship, The Ohio State University (\$26,316)
- 2017 Taaffe Research Award, The Ohio State University (\$2,000)
- 2017 Outstanding Graduate, IGSNRR, UCAS (Top 1%)
- 2017 “Institute Director” Scholarship, IGSNRR, UCAS (Top 3%)
- 2016 1st Class (Top) Academic Scholarship, IGSNRR, UCAS
- 2014 Outstanding Graduate, Northwest A&F University (Top 1%)

OTHER PROFESSIONAL EXPERIENCE

- Feb-Aug, 2021 **Graduate Research Assistant**, Department of Geography, OSU
Project: “Climate Resilience Project” funded by the American Honda Company
- Jun-Aug, 2019 **Graduate Research Assistant**, Department of Geography, OSU
Project: “Deployment of Storm Impact Prediction Model” funded by the Southern Company
- 2015-2017 **Graduate Research Assistant**, IGSNRR, UCAS
Project: “Impacts of climate change and land use on water erosion” - National Natural Science Foundation of China (Grant No. 41571271)

Jul-Aug, 2013 **Undergraduate Researcher**, Department of Agronomy and Horticulture, UNL
 Project: “Impacts of cover crop on soil properties” - Undergraduate Student Research Program funded by Northwest A&F University and UNL

INVITED TALKS

Oct, 2024	Department of Earth and Environmental Sciences, Indiana University Indianapolis, Indianapolis, IN (<i>upcoming</i>)
Jan. 26, 2024	School of Environment, Geography, and Sustainability, Western Michigan University, Kalamazoo, MI
Jul. 5, 2023	National Integrated Drought Information System (NIDIS) Webinar
Feb. 7, 2023	O'Neill School of Public and Environmental Affairs, Indiana University Bloomington, Bloomington, IN

CONFERENCE PRESENTATIONS

2024	<p>Poster Presentation on “Static Drought Assessment in a Nonstationary Climate” in the Extreme Heat Workshop Hosted by the Columbia Climate School, New York, NY, USA, July 10-12 (<i>upcoming</i>)</p> <p>Lightning talk in the Environmental Resilience Institute Research Symposium, Bloomington, IN, USA, April 30</p> <p>Virtual Oral Presentation on “Drought Classifications Shift due to Nonstationary Climate” in the American Association of Geographers (AAG) 2024 Annual Meeting, April 16-20</p>
2023	<p>Poster Presentation on “Climate Trends Force Step Changes in U.S. Drought Classifications” in the American Geophysical Union (AGU) 2023 Annual Meeting, San Francisco, CA, USA, December 11-15</p> <p>Virtual Oral Presentation on “Static Drought Assessment in a Nonstationary Climate” in the AAG 2023 Annual Meeting, March 23-27</p>
2022	<p>Oral Presentation on “Static Drought Assessment in a Nonstationary Climate” in the AGU 2022 Annual Meeting, Chicago, IL, USA, December 12-16</p> <p>Virtual Oral Presentation on “Predicting streamflow change under climate and land use changes in the contiguous U.S. using a time-varying Budyko framework and machine learning algorithms” in the 2022 International Forum on Big Data for Sustainable Development Goals, September 6-8</p> <p>Virtual Oral Presentation on “Accounting for the climatology of drought characteristics in the contiguous United States” in the AAG 2022 Annual Meeting, February 25-March 1</p>
2021	<p>Virtual Poster Presentation on “Uncertainty in the Gridded Daily Temperature Datasets for Estimation of Potential Evapotranspiration Values and Trends in the Continental United States” in the Edward Hayes Graduate Research Forum, April 9</p> <p>Virtual Oral Presentation on “Uncertainty in the Gridded Daily Temperature Datasets</p>

for Estimation of Potential Evapotranspiration Values and Trends in the Continental United States” in the AAG 2021 Annual Meeting, April 7-11

Virtual Poster Presentation on “Climatic, physiographic, and anthropogenic factors controlling spatial and temporal variability of water balance within the Budyko framework” in the American Meteorological Society (AMS) 2021 Annual Meeting, Jan 10-15

- 2020 Virtual Poster Presentation on “Climatic, physiographic, and anthropogenic factors controlling spatial and temporal variability of water balance within the Budyko framework” in the AGU 2020 Fall Meeting, December 1-17

Virtual Poster Presentation on “Identifying the Dominant Drivers of Hydrological Change in the Contiguous United States” in the 2020 Annual Water Resources Conference, November 9-12

Virtual Poster Presentation on “Identifying the Dominant Drivers of Hydrological Change in the Contiguous United States” in the 49th Annual Water Management Association of Ohio Conference, November 2-5

Virtual Oral Presentation on “Climatic, physiographic, and anthropogenic factors controlling spatial and temporal variability of water balance within the Budyko framework” in the 14th Graduate Climate Conferences, October 30-November 1

Virtual Oral Presentation on “Developing Impacts-Based Drought Thresholds in Ohio” in the 2020 East Lakes Division of the AAG, October 29-30

Virtual Poster Presentation on “Developing Impacts-Based Drought Thresholds in Ohio” in the 2020 Byrd Center Symposium on Climate Change, October 9

Virtual Oral Presentation on “Developing Impacts-Based Drought Thresholds in Ohio” in the 4th annual Midwest Student Conference on Atmospheric Research, September 26-27

Virtual Poster Presentation on “Developing Impacts-Based Drought Thresholds in Ohio” in the 2020 National Soil Moisture Workshop, August 12-13

- 2019 Poster Presentation on “Comparison of three short-term load forecast models in Southern California” in the 2019 Translational Data Analytic Institute Fall Forum, Columbus, OH, USA, November 7

Poster Presentation on “Spatio-temporal hydroclimatic variability in Ohio, USA” in the inaugural Byrd Center Symposium on Climate Change, Columbus, OH, USA, March 22

- 2018 Poster Presentation on “Spatio-temporal hydroclimatic variability in Ohio, USA” in the AGU 2018 Fall Meeting, Washington D.C., USA, December 10-14

Poster Presentation on “Comparison of three short-term load forecast models in Southern California” in the Graduate Research Forum, Departmental GeoWeek, Department of Geography, OSU, Columbus, OH, USA, November 4

- 2016 Oral Presentation on “Modeling impacts of climate change on watershed runoff and sediment yield, northeastern China” in the inaugural University of Chinese Academy of Sciences “Geographic Research and Lake Science” Graduate Academic

Conference, Nanjing, Jiangsu, China, October 25-27

Oral Presentation on “TETIS model-based runoff and sediment simulation of Wuyuer River Basin, black soil region of Northeast China” in the 33rd International Geographical Congress, Beijing, China, August 21-25

MANUSCRIPT REVIEWER

One Earth	IF: 14.944, 3 reviews
Science Advances	IF: 13.600, 1 review
Journal of Cleaner Production	IF: 11.072, 4 reviews
Sustainable Cities and Society	IF: 10.696, 2 reviews
Journal of Environmental Management	IF: 8.910, 1 review
Energy	IF: 8.857, 1 review
Energy Strategy Reviews	IF: 8.200, 1 review
Catena	IF: 6.280, 2 reviews
Geophysical Research Letters	IF: 5.576, 1 review
Journal of Hydrology: Regional Studies	IF: 5.119, 5 reviews
Scientific Reports	IF: 4.996, 2 reviews
Intl. Journal of Environmental Research and Public Health	IF: 4.614, 1 review
Economic Modelling	IF: 3.875, 1 review
Monthly Weather Review	IF: 3.728, 1 review
Journal of Environmental Planning and Management	IF: 3.371, 2 reviews
PeerJ	IF: 3.061, 3 reviews
Journal of Applied Meteorology and Climatology	IF: 3.000, 1 review
Frontiers in Water	IF: 2.900, 2 reviews
Utilities Policy	IF: 2.812, 5 reviews
The Professional Geographer	IF: 2.411, 2 reviews
Physical Geography	IF: 2.075, 4 reviews
Climate Research	IF: 1.100, 1 review
Annals of GIS	IF: 0.978, 1 review
Environmental Engineering and Management Journal	IF: 0.940, 1 review

EDITORSHIP

2024-present	Review Editor, Frontiers in Remote Sensing Terrestrial Water Cycle
2022-present	Assistant Editor, Anthropocene Science

PROFESSIONAL SERVICE

2022-2024	Judge, Climate Specialty Group Student Paper Competition, AAG Meeting
2023	Mentor, Climatesmatch Academy
2023	Session Chair, “Hazards, Risks, and Disasters: Resilience and Adaption to a Changing Climate” session, AAG Annual Meeting

DEPARTMENTAL SERVICE

2023-2024	Committee member, Master of Environmental Sustainability Curriculum
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	Committee, O'Neill School, Indiana University of Bloomington
2020-2021	Treasurer, Geography Graduate Organization, The Ohio State University
2019	Judge, undergraduate art pieces for G1900, Department of Geography, OSU

EXTRA TRAINING

2025	National Center for Faculty Development and Diversity (NCFDD) Faculty Success Program (virtual; <i>upcoming</i>)
2024	AAG Geography Faculty Development Alliance Workshop (virtual)
2024	National Science Foundation Grants Conference, Philadelphia, PA
2024	Center for Innovative Teaching and Learning (CITL) Foundational Course Development Institute (CDI), Bloomington, IN
2023	ForceSMIP Hackathon by ETH Zurich and National Center for Atmospheric Research (NCAR), Boulder, CO
2023	Diverse Mentoring Skill Building Workshop, SACNAS at Dartmouth, Hanover, NH
2023	NOAA Drought Assessment in a Changing Climate Technical Workshop, Boulder, CO
2022	Workshops in Academic Job Search Series, Dartmouth College, Hanover, NH
2022	Community Earth System Model (CESM) Workshop, Center Green, University Corporation for Atmospheric Research (UCAR), Boulder, CO
2020	Workshops in Academic Job Search Series, The Ohio State, Columbus, OH
2020	American Meteorological Society short course " <i>Introduction to Machine Learning in Python for Environmental Science Problems</i> ", Boston, MA

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2018-present	American Geophysical Union (AGU)
2021-present	American Association of Geographers (AAG)
2021-present	AAG Climate Specialty Group
2021	AAG Graduate Student Affinity Group
2021	American Meteorological Society (AMS)
2020	Water Management Association of Ohio (WMAO)

TECHNICAL SKILLS

Programming: Python/Jupyter, R, MATLAB, Unix/Linux shell, JavaScript

GIS & Geospatial software: ArcGIS, Google Earth Engine, GeoDa, ENVI, IDRISI

Hydrological Model: SWAT, TETIS, HEC-HMS

Statistical software: JMP, SPSS

Languages: Full Professional English, Native Mandarin, Limited Working Cantonese

Others: Origin, Auto CAD, MS Office Suite