

Curriculum Vitae

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RESEARCH FIELD AND INTEREST

Dr. Yiping Wu is a professor and the Vice Dean of the Institute of Global Environmental Change, Xi'an Jiaotong University, and the Lead of Innovation Team of Shaanxi Province. He earned his PhD from The University of Hong Kong in 2009. Subsequently, he secured a Scientist position at the ASRC Federal, USGS EROS Center, advancing to the role of Senior Scientist in 2014. He made substantial contributions to research and scientific initiatives during 6 years of research at USGS. In 2015, he achieved a full professorship at Xi'an Jiaotong University up to the present moment.

His major research interests are Ecohydrological Processes, Biogeochemical Modeling, Ecosystem Carbon Dynamics, Water-Carbon Coupling, Nonpoint Source Pollution, Model Development, and Data Assimilation. He has developed/integrated a few numerical models such as the hydro-biogeochemical coupling model (SWAT-DayCent) and a universal model inversion tool (Model-R Coupler), and he also developed the automatic model inversion system for a large-scale general ensemble biogeochemical modeling system (GEMS-EDCM-Auto). He has published over 100 articles in high-quality SCI journals (e.g., PNAS, Nature Communications, Global Change Biology, Engineering, Communications Earth and Environment, Agricultural and Forest Meteorology) with an H-Index of 40, ranking among the top 2% of scientists worldwide. He served as a Section Editor, Associate Editor, and Editorial Board Member for a few esteemed international journals (Engineering, Journal of Environmental Management, Geoscience Letters, Carbon Balance and Management).

He earned the AOGS Early Career Researcher Distinguished Lecture Award in 2017, acted as the Secretary of AOGS Hydrology Section 2017-2019, and also served for AOGS Journal (Geoscience Letters) since 2018. He is very active internationally and got Invited Talks in conferences including AGU, AOGS, CAE International Summit, and CYWater Conferences.

EDUCATION

- Ph.D. 2009 in Water & Environmental Engineering, The University of Hong Kong, HKSAR
- M.E. 2004 in Environmental Engineering, Xi'an University of Arch. & Tech., Xi'an, China
- B.E. 2001 in Environmental Engineering, Xi'an University of Arch. & Tech., Xi'an, China

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RESEARCH/TEACHING/WORKING EXPERIENCE

- 09/2015 – Present **Full Professor**, Department of Earth & Environmental Science, School of Human Settlements & Civil Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi, China
- 12/2014 – 08/2015 **Senior Scientist**, ASRC Federal, USGS EROS Center, Sioux Falls, SD 57198, USA
- 11/2009 – 11/2014 **Scientist**, ASRC Federal, USGS EROS Center, Sioux Falls, SD 57198, USA

PROFESSIONAL ACTIVITY / ACADEMIC POSITION

- Member of Higher Education Teaching Committee of China's Ministry of Education
- AOGS Early Career Researcher Distinguished Lecture Award
- Editor / Associate Editor / EBM for international journals (Engineering, JEMA, GOSL, CBM)

SELECTED JOURNAL PUBLICATIONS

1. **Wu Y**, Yin X, Zhou G*, Bruijnzeel LA, Dai A, Wang F, et al., 2024. Rising rainfall intensity induces spatially divergent hydrological changes within a large river basin. *Nature Communications*, 15, 823.
2. Qiu L, Xue Q, **Wu Y***, Zhang X, Alexandrov G, et al., 2024. Responses of precipitation and water vapor budget on the Chinese Loess Plateau to global land cover change forcing. *Journal of Environmental Management*, 365.
3. An S, **Wu Y***, Liang W, Zhang G, Chen J, Liu S, Zhao F, Qiu L, Yin X. 2024. Enhancing ecohydrological simulation with improved dynamic vegetation growth module in SWAT. *Journal of Hydrology*, 644.
4. Zhao F, Wang X, **Wu Y***, Singh SK, 2023. Prefectures vulnerable to water scarcity are not evenly distributed across China. *Communications Earth & Environment*, 4, 145.
5. Li H, **Wu Y***, Liu S, Xiao J, Zhao W, Chen J, et al., 2022. Decipher soil organic carbon dynamics and driving forces across China using machine learning. *Global Change Biology*, 28, 3394-3410.
6. Yin X, **Wu Y***, Zhao W, Liu S*, Zhao F, Chen J, et al., 2023. Spatiotemporal responses of net primary productivity of alpine ecosystems to flash drought: the Qilian Mountains. *Journal of Hydrology*, 624, 129865.
7. Zhao F, Wang X, **Wu Y***, Bellie S, Liu S, 2023. Enhanced dependence of China's vegetation activity on soil moisture under drier climate conditions. *Journal of Geophysical Research: Biogeosciences*, 128, 10.1029/2022JG007300.
8. Li H, **Wu Y***, Liu S*, Zhao W, Xiao J, Winowiecki L, et al., 2022. The Grain-for-Green project offsets warming-induced soil organic carbon loss and increases soil carbon stock in Chinese Loess Plateau. *Science of the Total Environment*, 837, 155469.
9. Zhao F, Ma S, **Wu Y***, Qiu L, Wang W, Lian Y, et al., 2022. The role of climate change and vegetation greening on evapotranspiration variation in the Yellow River Basin, China. *Agricultural and Forest Meteorology*, 316, 1-14.
10. Qiu L, Yu M, **Wu Y***, Yao Y, Wang Z, Shi Z, et al., 2021. Assessing and predicting soil carbon density in China using CMIP5 earth system models. *Science of the Total Environment*, 799, 149247.
11. Li H, **Wu Y***, Liu S, Xiao J, 2021. Regional contributions to interannual variability of net primary production and climatic attributions. *Agricultural and Forest Meteorology*, 303, 108384.
12. Li H, **Wu Y***, Chen J, Zhao F, Wang F, Sun Y, et al., 2021. Responses of soil organic carbon to climate change in the Qilian Mountains and its future projection. *Journal of Hydrology*, 596, 126110.
13. Zhao F, **Wu Y***, Yin X, Alexandrov G, Qiu L, 2022. Toward sustainable revegetation in the Loess Plateau using coupled water and carbon management. *Engineering*, 7, 1-12.
14. Zhao F, **Wu Y***, Wang L, Liu S, Wei X, Xiao J, Qiu L, Sun P, 2020. Multi-environmental impacts of

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- biofuel production in the U.S. Corn Belt: A coupled hydro-biogeochemical modeling approach. *Journal of Cleaner Production*, 251, 119561.
15. Zhao F, **Wu Y***, Yao Y, Sun K, Zhang X, Winowiecki L, et al., 2020. Predicting the climate change impacts on water-carbon coupling cycles for a loess hilly-gully watershed. *Journal of Hydrology*, 581, 124388.
 16. Sun P, **Wu Y***, Xiao J, Hui J, Hu J, Zhao F, et al., 2019. Remote sensing and modeling fusion for investigating the ecosystem water-carbon coupling processes. *Science of the Total Environment*, 697, 134064.
 17. Zhao F, **Wu Y***, Bellie S, Long A*, Qiu L, Chen J, et al., 2019. Climatic and hydrologic controls on net primary production in a semiarid loess watershed. *Journal of Hydrology*, 568, 803–815.
 18. Feng S, Liu S, Huang Z, Jing L, Zhao M, Peng Xi, Yan W, **Wu Y**, et al., 2019. Inland Water Bodies in China: New Features Discovered in the Long-term Satellite Data. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*.
 19. Qiu L, Hao M, **Wu Y***, 2017. Potential impacts of climate change on carbon dynamics in a rain-fed agro-ecosystem on the Loess Plateau of China. *Science of the Total Environment*, 577: 267–278.
 20. **Wu Y***, Liu S, Qiu L, and Sun Y, 2016. SWAT-DayCent coupler: An integration tool for simultaneous hydro-biogeochemical modeling using SWAT and DayCent. *Environmental Modelling & Software*, 86: 81–90.
 21. Tan Z*, Liu S*, Sohl T, **Wu Y**, and Young C, 2015. Ecosystem carbon stocks and sequestration potential of federal lands across the conterminous United States. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 112(41): 12723–12728.
 22. **Wu Y***, Liu S*, and Tan Z, 2015. Quantitative attribution of major driving forces on soil organic carbon dynamics. *Journal of Advances in Modeling Earth Systems*, 7(1): 21–34.
 23. **Wu Y**, Liu S* and Li Z, 2012. Identifying potential areas for biofuel production and evaluating the environmental effects: a case study of the James River Basin in the Midwestern United States, *Global Change Biology Bioenergy*, 4(6): 875–888.
 24. Chen J* and **Wu Y**, 2012. Advancing representation of hydrologic processes in the Soil and Water Assessment Tool (SWAT) through integration of the TOPographic MODEL (TOPMODEL) features, *Journal of Hydrology*, 420–421: 319–328.
 25. Zhou G*, Wei X, **Wu Y**, Liu S, Huang Y, Yan J, Zhang D, Zhang Q, Liu J, Meng Z, Wang C, Chu G, Liu SZ, Tang X, and Liu X, 2011. Quantifying the hydrological responses to climate change using an intact forested small watershed in Southern China, *Global Change Biology*, 17(12): 3736–3746.