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EDUCATION

Ph.D., 2012	Water Resources Engineering , State University of New York, College of Environmental Science and Forestry (SUNY-ESF) in Association with Syracuse University, Syracuse, NY
M.S., 2007	Quaternary Geology , Lanzhou University, China
B.S., 2004	Geological Science , Lanzhou University, China

EMPLOYMENT

Oct. 2017 – present	Scientist , Atmospheric Sciences & Global Change Division, Pacific Northwest National Laboratory, Richland, WA
Oct. 2015 – Sep. 2017	Research Associate , Atmospheric Sciences & Global Change Division, Pacific Northwest National Laboratory, Richland, WA
Oct. 2012 – Oct. 2015	Research Associate , Dept. of Civil and Environmental Engineering, University of Washington, Seattle, WA
Aug. 2010 – Aug. 2012	Research Analyst , USDA Forest Service Northern Research Station, Syracuse, NY
Aug. 2007 – Aug. 2010	Research Assistant , Dept. of Environmental Resources Engineering, SUNY ESF, Syracuse, NY

REFEREED PUBLICATIONS

- 20) Bao, J; **T. Zhou**; M. Huang; Z. Hou, W. Perkins, S. Harding, G. Hammond, H. Ren, P. Thorne, S. Suffield, and J. Zachara (2018) Modulating Factors of Hydrologic Exchanges in a Large-Scale River Reach: Insights from Three-Dimensional Computational Fluid Dynamics Simulations. *Hydrological Processes* <https://doi.org/10.1002/hyp.13266>
- 19) **Zhou, T**; N. Voisin, T. Fu (2018) Non-stationary hydropower generation projections constrained by environmental and electricity grid operations over the western United States. *Environmental Research Letters* <http://iopscience.iop.org/article/10.1088/1748-9326/aad19f/meta>
- 18) Wartenburger, R; ...37 coauthors... **T. Zhou** (2018). Evapotranspiration simulations in ISIMIP2a - Evaluation of spatio-temporal characteristics with a comprehensive ensemble of independent datasets. *Environmental Research Letters* <https://doi.org/10.1088/1748-9326/aac4bb>

- 17) Sun, N; M. Wigmosta, **T. Zhou**, J. Lundquist, S. Dickerson-Lange, N. Cristea (2018). Evaluating the functionality and streamflow impacts of explicitly modeling forest-snow interactions and canopy gaps in a distributed hydrologic model. *Hydrological Processes* <https://doi.org/10.1002/hyp.13150>
- 16) **Zhou, T**; J. Bao, M. Huang, Z. Hou, E. Arntzen, R. Mackley, S. Harding, Y. Xu,, X. Song, X. Chen, J. Stegen, G. Hammond, P. Thorne, and J. Zachara (2018) Riverbed hydrologic exchange dynamics in a large regulated river reach. *Water Resources Research* <https://doi.org/10.1002/2017WR020508>
- 15) **Zhou, T**; N. Voisin; G. Leng; and M. Huang (2018). Sensitivity of regulated flow regime to climate change in the Western United States. *Journal of Hydrometeorology* <https://doi.org/10.1175/JHM-D-17-0095.1>
- 14) Zhang, Y; M. Pan; J. Sheffield; A. Siemann; C. Fisher; M. Liang; H. Beck; N. Wanders; R. MacCracken; P. R. Houser; **T. Zhou**; D. P. Lettenmaier; Y. Ma; R. T. Pinker; J. Bytheway; C. D. Kummerow; and E. F. Wood. (2018). A Climate Data Record (CDR) for the global terrestrial water budget: 1984–2010. *Hydrology and Earth System Sciences*. <https://doi.org/10.5194/hess-22-241-2018>
- 13) Bisht, G; M. Huang; **T. Zhou**; X. Chen; H. Dai; G. Hammond; W. Riley; J. Downs; Y. Liu; and J. Zachara. (2017). Coupling a three-dimensional subsurface flow and transport model with a land surface model to simulate stream-aquifer-land interactions (CP v1.0). *Geoscientific Model Development* <https://doi.org/10.5194/gmd-10-4539-2017>
- 12) Yuan, X; M. Zhang; L. Wang; and **T. Zhou**. (2017). Understanding and seasonal forecasting of hydrological drought in the Anthropocene. *Hydrology and Earth System Sciences* <https://doi.org/10.5194/hess-21-5477-2017>
- 11) Voisin, N; M. Kintner-Meyer; D. Wu, R. Skaggs; T. Fu; **T. Zhou**; T. Nguyen; and I. Kraucunas. (2017). Opportunities for joint water-energy management: sensitivity of the 2010 Western U.S. electricity grid operations to climate oscillations. *Bulletin of the American Meteorological Society*. <https://doi.org/10.1175/BAMS-D-16-0253.1>
- 10) **Zhou, T**; M. Huang; J. Bao; Z. Hou; E. Arntzen; R. Mackley; A. Crump; A. E. Goldman; X. Song; Y. Xu; and J. Zachara. (2017) A New Approach to Quantify Shallow Water Hydrologic Exchanges in a Large Regulated River Reach. *Water*. <https://doi.org/10.3390/w9090703>
- 9) **Zhou, T**; B. Nijssen; H. Gao; and D.P. Lettenmaier. (2016). The contribution of reservoirs to global land surface water storage variations. *Journal of Hydrometeorology*. <https://doi.org/10.1175/JHM-D-15-0002.1>
- 8) **Zhou, T**; I. Haddeland; B. Nijssen; and D. P. Lettenmaier. (2016). Human induced changes in the global water cycle. *Terrestrial Water Cycle and Climate Change: Natural and Human-Induced Impacts; Geophysical Monograph 221; 57*. <https://doi.org/10.1002/9781118971772.ch4>
- 7) **Zhou, T**; B. Nijssen; G. J. Huffman; and D. P. Lettenmaier. (2014). Evaluation of real-time satellite precipitation data for global drought monitoring. *Journal of Hydrometeorology*. <https://doi.org/10.1175/JHM-D-13-0128.1>
- 6) Nijssen, B; S. Shukla; C. Lin; H. Gao; **T. Zhou**; J. Sheffield; E. F. Wood; and D. P. Lettenmaier. (2014). A prototype global drought information system based on multiple land surface models. *Journal of Hydrometeorology*. <https://doi.org/10.1175/JHM-D-13-090.1>

- 5) **Zhou, T.** and T. A. Endreny. (2013). Reshaping of the hyporheic zone beneath river restoration structures: flume and hydrodynamic experiments. *Water Resources Research*.
<https://doi.org/10.1002/WRCR.20384>
- 4) **Zhou, T.** and T. A. Endreny. (2012). Meander hydrodynamics initiated by river restoration deflectors. *Hydrological Processes*. <https://doi.org/10.1002/hyp.8352>
- 3) **Zhou, T.**; B. Pan; X. Liu; H. Su; and Z. Hu. (2008). The discovery of ice-wedge casts in Ordos Plateau; China and permafrost boundary establishment (in Chinese with English abstract). *Journal of Glaciology and Geocryology* <http://bcdt.westgis.ac.cn/CN/abstract/abstract415.shtml>
- 2) Pan, B; H. Su; X. Liu; X. Hu, T. Zhou; C. Hu; and J. Li; (2007). River terraces of the Yellow River and their genesis in eastern Lanzhou Basin during last 1.2 Ma (in Chinese with English abstract). *Quaternary Sciences*. <http://www.dsjy.com.cn/CN/abstract/abstract9193.shtml>
- 1) Pan, B; H. Su; C. Hu; X. Hu; **T. Zhou**; and J. Li. (2007). Discovery of a 1.0 Ma Yellow River terrace and re-dating of the fourth Yellow River terrace in Lanzhou area. *Progress in Natural Science*.
<https://doi.org/10.1080/10020070612331343246>

NON-REFEREED PUBLICATIONS

Nowak, David J.; R. E. Hoehn III; A. R. Bodine; E. J. Greenfield; A. Ellis; T. A. Endreny; Y. Yang; **T. Zhou**; R. Henry (2013): Assessing urban forest effects and values: Toronto's urban forest. *Resour. Bull. NRS-79*; U.S. Department of Agriculture, Forest Service, Northern Research Station. 59 p.
<https://doi.org/10.2737/NRS-RB-79>.

DATA

Gosling, S; H. Müller Schmied; R. Betts; J. Chang; P. Ciais; R. Dankers; P. Döll; S. Eisner; M. Flörke; D. Gerten; M. Grillakis; N. Hanasaki; S. Hagemann; M. Huang; Z. Huang; S. Jerez; H. Kim; A. Koutroulis; G. Leng; X. Liu; Y. Masaki; P. Montavez; C. Morfopoulos; T. Oki; L. Papadimitriou; Y. Pokhrel; F. Portmann; R. Orth; S. Ostberg; Y. Satoh; S. Seneviratne; P. Sommer; T. Stacke; Q. Tang; I. Tsanis; Y. Wada; **T. Zhou**; M. Büchner; J. Schewe; F. Zhao (2017): ISIMIP2a Simulation Data from Water (global) Sector. GFZ Data Services. <https://doi.org/10.5880/PIK.2017.010>

PUBLICATIONS IN REVIEW/REVISION/PRESS

Golaz, C; ...80 coauthors...; **T. Zhou**; Q. Zhu (in review). The DOE E3SM coupled model version 1: Overview and evaluation at standard resolution. *Journal of Advances in Modeling Earth Systems*

Shah, H; **T. Zhou**, M. Huang, M. Vimal (in review). Influence of irrigation on water budget in the Indian sub-continental river basins. *Journal of Geophysical Research: Atmospheres*

CONFERENCE PRESENTATIONS (Selected)

Zhou, T., R. Leung, N. Voisin, H. Li, G. Leng, T. Tesfa, 2018. Global irrigation water withdrawal simulated by fully coupled land surface, river, and water management models. *American Geophysical Union Fall Meeting, Washington, DC*

- Zhou, T., N. Voisin, T. Fu, **2017**. Non-stationary hydropower generation projection over the western United States. *American Geophysical Union Fall Meeting, New Orleans, LA*
- Zhou, T., J. Bao, M. Huang, Z. Hou, E. Arntzen and R. Mackley, **2016**. Quantifying hyporheic exchange dynamics in a highly regulated large river reach. *American Geophysical Union Fall Meeting, San Francisco, CA*
- Zhou, T., B. Nijssen, I. Haddeland, H. Gao, and D. P. Lettenmaier. **2014**. Reservoir in Global Water Cycle: Macro Scale Hydrologic Modeling for Water Management. *American Geophysical Union Fall Meeting, San Francisco, CA*
- Zhou, T., B. Nijssen, I. Haddeland, and D. P. Lettenmaier. **2013**. Macro Scale Hydrologic Modeling for Water Management: Re-construction of Large Reservoir Storage Time Series in the Continental U.S. *American Geophysical Union Fall Meeting, San Francisco, CA*
- Lettenmaier, D. P., T. Zhou, G. J. Huffman, and B. Nijssen. **2013**. Evaluation of TMPA v7 Real-Time Precipitation for Global Hydrologic Prediction. *The 3rd International Workshop on Global Flood Monitoring & Modelling, College Park, MD, USA*
- Zhou, T., A. S. Ward, B. L. O'Connor, and T. A. Endreny. **2012**. Floodplain Hyporheic Response under Dam Release Hydrographs. *American Geophysical Union Fall Meeting, San Francisco, CA*
- Zhou, T., and T. A. Endreny. **2011**. Hydrodynamic impacts of disrupting point bar steering with river restoration structures. *American Geophysical Union Fall Meeting, San Francisco, CA*
- Zhou, T., and T. A. Endreny. **2011**. Changes of hydraulic patterns with in-channel restoration structures at a point bar. *1st Annual Meeting of the American Ecological Engineering Society, Ashville, NC*
- Zhou, T., and T. A. Endreny. **2010**. Flume analysis of in-channel restoration structures and impacts to secondary circulation flows. *World Congress of the International Commission of Agricultural and Biosystems Engineering, Quebec City, Canada*
- Zhou, T., and T. A. Endreny. **2010**. Hyporheic exchange flow around in-channel restoration structures: simulation and flume experiments. *Association of American Geographers Annual Meeting, Washington, DC*
- Zhou, T., and T. A. Endreny. **2009**. (invited talk) Hydraulic impacts of in-channel restoration structures in a meander band: simulation with CFD. *Workshop of Techniques for Evaluating Water Resources in the Finger Lakes, sponsored by United States Geological Survey, Finger Lakes - Lake Ontario Watershed Protection Alliance, and the Finger Lakes Institute, Geneva, NY*

SERVICES

- Referee for: *Water Resources Research*; *Journal of Hydrometeorology*; *Journal of Hydrology*; *Journal of Geophysical Research: Atmospheres*; *Hydrology and Earth System Sciences*; *Hydrological Processes*; *Hydrogeology Journal*; *AGU Books*; *Earth System Dynamics*; *Water Science and Technology*; *International Journal of Climatology*; *Remote Sensing*; *Estuarine, Coastal and Shelf Science*; *WIREs Water*, etc.
- Served as review panelist for 2014 US EPA National Priorities Grant
- Editorial board member of [Advances in Climate Change Research](#) (2018 – present)

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HONORS AND AWARDS

2018	PNNL Exceptional Contribution Program (ECP) Award
2017	EBSO Best Award, Pacific Northwest National Laboratory
2011	AEES Conference Travel Grant
2007-2010	Tuition Scholarship Award, SUNY ESF, NY
2004	First Place in the 5 th "Challenge Cup" of the College Student Research Competition of Gansu Province, China
2002	Tuition Scholarship Award, Lanzhou University, China

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