

Guotao Cui

1617 Person St. Apt. F204, Laramie, WY 82070, USA

☎ (+1) 307-761-2629 | ✉ gcui@uwyo.edu | 🏠 guotaocui.gitlab.io | 🔍 Google Scholar | 🌐 [guotaocui](https://guotaocui.com)

EDUCATION

2014–2017	Ph.D. in CIVIL ENGINEERING, University of Wyoming , WY, USA → Major in WATER RESOURCES & HYDROLOGY → <i>Conferral Date</i> : Dec. 19, 2017 → Dissertation: Infiltration process in sloping layered soils → Advisor: Jianting (Julian) Zhu
2010–2013	M.S. in HYDROLOGY & WATER RESOURCES, Zhengzhou University , Henan, China → Advisor: Qiting Zuo
2006–2010	B.S. in WATER CONSERVANCY & HYDROPOWER ENGINEERING, Zhengzhou University , Henan, China

PROFESSIONAL SERVICE

- *Professional Affiliations*: American Geophysical Union (AGU).
- *Reviewer Board*: [Water](#).
- *Peer Reviewer*: Water Resources Research, Journal of Hydrology, Soil Science Society of America Journal, Agricultural and Forest Meteorology, Journal of Hydrologic Engineering, Environmental Pollution, Environmental Earth Sciences, Water, Geosciences, Entropy, Atmosphere, Environmental Science and Pollution Research, Mathematics.

REFEREED JOURNAL PUBLICATIONS

1. **Cui, G.**, R. Bales, R. Rice, M. Anderson, F. Avanzi, P. Hartsough, W. Guo, and M. Conklin, Mountain Precipitation Patterns in Mixed Rain-Snow Areas from a Distributed Wireless-Sensor Network and a Random Forest Model, (*To be submitted*).
2. **Cui, G.**, R. Bales, R. Rice, M. Anderson, F. Avanzi, P. Hartsough, and M. Conklin, Characterizing rain-snow transition elevation in mountain basins by wireless sensor networks, (*under review, Journal of Hydrometeorology*).
3. **Cui, G.**, and J. Wang (2019), Improving the DNDC biogeochemistry model to simulate soil temperature and emissions of nitrous oxide and carbon dioxide in cold regions, *Science of The Total Environment*, 687, 61-70, doi:10.1016/j.scitotenv.2019.06.054.
4. **Cui, G.**, and J. Zhu (2018), Prediction of unsaturated flow and water backfill during infiltration, *Journal of Hydrology*, 557, 509–521, doi:10.1016/j.jhydrol.2017.12.050.
5. **Cui, G.**, and J. Zhu (2018), Infiltration model based on traveling characteristics of wetting front, *Soil Science Society of America Journal*, doi:10.2136/sssaj2017.08.0303.
6. **Cui, G.**, and J. Zhu (2017), Infiltration model in sloping layered soils and guidelines for model parameter estimation, *Hydrological Sciences Journal*, 62(13), 2222-2237, doi:10.1080/02626667.2017.1371848.
7. **Cui, G.**, and J. Zhu (2018), Modeling infiltration and runoff with surface crust under unsteady rainfalls, *Journal of Hydrologic Engineering*, doi:10.1061/(ASCE)HE.1943-5584.0001672.
8. Cheng, Y., **G. Cui**, and J. Zhu (2017), Using time compression approximation to determine actual infiltration rate from variable rainfall events, *Hydrology Research*, doi:10.2166/nh.2017.062.
9. Zuo, Q., and **G. Cui** (2013), International viewpoint and news: Chemical leaks contaminate Chinese river: Viewing environmental emergency response of China, *Environmental Earth Sciences*, 69(8), 2801–2803, doi:10.1007/s12665-013-2331-1.
10. Li, D., Q. Zuo, and **G. Cui** (2013), Disposal of chemical contaminants into groundwater: viewing hidden environmental pollution in China, *Environmental Earth Sciences*, 70(4), 1933–1935, doi:10.1007/s12665-013-2463-3.
11. Zuo, Q., R. Jin, J. Ma, and **G. Cui** (2014), China pursues a strict water resources management system, *Environmental Earth Sciences*, 72(6), 2219–2222, doi:10.1007/s12665-014-3369-4.

12. Zuo, Q., H. Zhao, C. Mao, J. Ma, and **G. Cui** (2015), Quantitative analysis of human-water relationships and harmony-based regulation in the Tarim river basin, *Journal of Hydrologic Engineering*, 20(8), 05014030, doi:10.1061/(ASCE)HE.1943-5584.0001118.
13. Zuo, Q., R. Jin, J. Ma, and **G. Cui** (2015), Description and application of a mathematical method for the analysis of harmony, *The Scientific World Journal*, doi:10.1155/2015/831396.

CONFERENCE PROCEEDINGS

14. **Cui, G.**, R. Bales, M. Conklin, R. Rice, F. Avanzi, and P. Hartsough (2019), Rain-snow transition elevation from wireless sensor network in American and Feather River basins, *87th Annual Western Snow Conference*, Reno, Nevada, USA.

OTHER PUBLICATIONS

15. Bales, R., **G. Cui**, R. Rice, X. Meng, Z. Zhang, P. Hartsough, S. Glaser and M. Conklin (2020), Snow depth, air temperature, humidity, soil moisture and temperature, and solar radiation data from the basin-scale wireless-sensor network in American River Hydrologic Observatory (ARHO), V2, UC Merced, Dataset, <https://doi.org/10.6071/M39Q2V>.
16. **Cui, G.**, and Q. Zuo (2012), Analysis and quantitative evaluation of human activities affecting river system network interconnected relationship, *Journal of Water Resources Research*, 1, 326–333.
17. **Cui, G.**, and Q. Zuo (2012), Relationship between interconnected river system network and the strictest water resources management system, *South-to-North Water Transfers and Water Science & Technology*, 2, 129–132.
18. **Cui, G.**, Q. Zuo, Z. Li, and M. Dou (2012), Analysis of function and adaptability for interconnected river system network, *Water Resources and Power*, 2, 1–5.
19. **Cui, G.**, Q. Zuo, and M. Dou (2011), Development evolution and influences of the interconnected river system network at home and abroad, *South-to-North Water Transfers and Water Science & Technology*, 4, 73–76.
20. **Cui, G.**, and Q. Zuo (2011), Research status and prospect of ecological regulation, *South-to-North Water Transfers and Water Science & Technology*, 6, 90–97.
21. Zuo, Q., and **G. Cui** (2012), Study on theoretical system and framework of interconnected river system network, *Water Resources and Power*, 1, 1–5.
22. Dou M., **G. Cui**, Q. Zuo, C. Wang, C. Mao, and Y. Xu (2011), Character analysis of interconnected river system network, *China Water Resources*, 16, 17–19.
23. Zuo, Q., and **G. Cui** (2012), Improvement of management and protection system in water function zones, *China Water Resources News*, March 15, 2012. (Newspaper)
24. Hu, Y., and **G. Cui** (2012), Discussions on strategic direction of water conservancy development in Heilongjiang province, *Heilongjiang Science and Technology of Water Conservancy*, 12, 207–210.
25. Zuo, Q., B. Zhang, Z. Wang, F. Guan, and **G. Cui** (2011), Revelation and discussion on water science research from the “2011 No.1 document by the central committee of the CPC”, *South-to-North Water Transfers and Water Science & Technology*, 5, 68–73.

PRESENTATIONS

1. **Cui, G.**, R. Bales, M. Conklin, R. Rice, F. Avanzi, P. Hartsough, and W. Guo, Mountain Precipitation Patterns in Mixed Rain-Snow Areas from a Distributed Wireless-Sensor Network and a Random Forest Model, *American Geophysical Union (AGU) Fall Meeting*, Abstract C41B-01, San Francisco, CA, USA, Dec. 9–13, 2019. (Oral)
2. Guo, W., S. Khan, R. Bales, **G. Cui**, Q. Ma, Simulating water-carbon interactions in a Mediterranean mountain ecosystem using a dynamic global vegetation model, *American Geophysical Union (AGU) Fall Meeting*, Abstract B21G-2410, San Francisco, CA, USA, Dec. 9–13, 2019. (Poster)
3. **Cui, G.**, R. Bales, M. Conklin, R. Rice, F. Avanzi, P. Hartsough, and W. Guo, Estimating precipitation in a mountainous region from a wireless-sensor network, *Southern Sierra Critical Zone Observatory 2019 Annual Meeting*, Merced, CA, USA, Aug. 22, 2019. (Poster)
4. **Cui, G.**, R. Bales, M. Conklin, R. Rice, F. Avanzi, and P. Hartsough, Rain-snow transition elevation from wireless sensor network in American and Feather River basins, *87th Annual Western Snow Conference*, Reno, Nevada, USA, Apr. 15–18, 2019. (Poster)
5. **Cui, G.**, and J. Zhu, A simple and accurate rate-driven infiltration model, *American Geophysical Union (AGU) Fall Meeting*, Abstract H33D-1704, New Orleans, LA, USA, Dec. 11–15, 2017. (Poster)

6. **Cui, G.**, and J. Zhu, Dynamic modeling of infiltration in unsaturated layered soils, *American Geophysical Union (AGU) Fall Meeting*, Abstract H21C-1410, San Francisco, CA, USA, Dec. 12–16, 2016. (Poster)
7. **Cui, G.**, and J. Zhu, Effective Green-Ampt parameters of sloping layered soils, *American Geophysical Union (AGU) Fall Meeting*, Abstract H23B-1583, San Francisco, CA, USA, Dec. 14–18, 2015. (Poster)
8. **Cui, G.**, and J. Zhu, Effective hydraulic parameters for sloping heterogeneous soil formations, *Soil Science Society of America (SSSA) Annual Meeting*, Abstract 321-9, Minneapolis, MN, USA, Nov. 15–18, 2015. (Poster)
9. **Cui, G.**, and Q. Zuo, Analysis and quantitative evaluation of human activities affecting river system network inter-connected relationship, *The 10th China Water Forum*, Wuhan, China, Aug. 24–26, 2012. (Oral)
10. **Cui, G.**, and J. Zhu, Infiltration model in layered soils: Application of steady-state modeling, *Civil Engineering Seminar at University of Wyoming*, Laramie, WY, USA, Mar. 9, 2017. (Oral)

HONOURS & AWARDS

- | | |
|---|------|
| • Summer Ph.D. Augmentation, University of Wyoming, WY, USA | 2017 |
| • “Zhang Guangdou Funding” Scholarship for Highly Promising Students, Tsinghua University Education Foundation, China | 2013 |
| • Outstanding Graduate Award of Henan Province, Department of Education of Henan Province, China | 2013 |
| • National Graduate Scholarship, Ministry of Education of China, China | 2012 |
| • Outstanding Graduate Research Award, Zhengzhou University, China | 2012 |
| • Outstanding Youth Paper Award of China Water Forum, China Society of Natural Resources, China | 2012 |
| • Undergraduate Scholarship, Zhengzhou University, China | 2007 |

PROGRAMMING/MODELING SKILLS

- *Programming Languages*: Python, C++, GNU/Linux Bash, Fortran, Matlab, L^AT_EX, JavaScript.
- *Skills*: HYDRUS, DNDC, Google Earth Engine, SWAT, LPJ-GUESS, MODFLOW, ArcGIS, TensorFlow, Git, HPC platform, OpenMP.

REFERENCES

Jianting (Julian) Zhu

Associate Professor
College of Engineering and Applied Science
University of Wyoming

Phone: 307-766-4375
E-mail: jzhu5@uwyo.edu

Thijs Kelleners

Associate Professor
College of Agriculture and Natural Resources
University of Wyoming

Phone: 307-766-4279
E-mail: tkellene@uwyo.edu

Noriaki Ohara

Assistant Professor
College of Engineering and Applied Science
University of Wyoming

Phone: 307-766-4366
E-mail: nohara1@uwyo.edu