Curriculum Vitae

Zihao Chen (陈子豪)

PhD student
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Research

Forest Ecology, Climate Change, Soil Organic Carbon, Litter Decomposition, Geospatial Analysis

My research examines the responses and dynamics of forest soil organic carbon in a changing climate and its functional role in regulating ecosystem material cycling and energy flow. I aim to understand how belowground carbon processes influence forest ecosystem functioning and carbon-climate feedbacks across spatial scales. Using a methodological suite that includes Meta-analysis, Bayesian modeling, and machine learning, I quantify how these processes respond to global climate change, aiming to improve the predictive accuracy of terrestrial carbon cycle models. My work leverages R and ArcGIS as main analytical platforms, supplemented by Python and Google Earth Engine (GEE).

Educations

2022.9-	**PhD student**	Physical Geography, Fujian Normal University, Supervisor: Prof. Wu(吴福忠)
2024.5-2026.4	**Visiting PhD student** (sponsored by CSC)	KU Leuven, Supervisor: Koenraad Van Meerbeek
2018.9-2021.6	**Master**	Forestry, Sichuan Agricultural University, Supervisor: Dr. Zhang (张丽)
2014.9-2018.6	**Bachelor**	Forestry, Sichuan Agricultural University

Awards

2025	National Scholarship for Doctoral Students *Ministry of Education of China*	2024	First-Class Academic Scholarship *Ministry of Education of China*
2023	First-Class Academic Scholarship *Ministry of Education of China*	2022	"Bao Chen" Innovation Scholarship *Fujian Normal University*

Languages

Native speaker: Mandarin, Cantonese Fluent: English

Papers in peer-reviewed journals

1. **Zihao Chen**, Chang Liu, Kai Yue, Roland Bol, Guillaume Patoine, Ellen Desie, Xiangyin Ni, Fuzhong Wu*, Koenraad Van Meerbeek. Dominance of soil organic carbon flux over stock in driving global forest biomass. (***Submitted***)
2. Xia Jin, Qiqian Wu*, Josep Peñuelas, Jordi Sardan, Yan Peng, Zimin Li, Xin Peng, Petr Heděnec, Qiao Yang, Chaoxiang Yuan, Ji Yuan, **Zihao Chen**, Zemin Zhao, Fuzhong Wu, and Kai Yue*. Climate and anthropogenic activities control the concentrations of copper, zinc, cadmium and chromium in global inland waters. ***Communications Earth & Environment***, 2025, 6(1): 520. https://doi.org/10.1038/s43247-025-02508-6.
3. Huihui Wen, Koenraad Van Meerbeek, Huiling Zhang, Yan Peng, Kai Yue, Xiangyin Ni, Danni Qiu, **Zihao Chen**, Roland Bol, and Fuzhong Wu*. Loss of soil fauna following conversion of subtropical natural forests. ***Soil Ecology Letters***, 2025, 7(3): 250315. https://doi.org/10.1007/s42832-025-0315-1.
4. Xia Jin, Zimin Li*, Josep Peñuelas, Jordi Sardan, Qiqian Wu, Yan Peng, Petr Heděnec, Zhijie Li, Chaoxiang Yuan, Ji Yuan, **Zihao Chen**, Zemin Zhao, Fuzhong Wu, and Kai Yue*. Quantitative assessment on the distribution patterns of microplastics in global inland waters. ***Communications Earth & Environment***, 2025, 6(1): 331. https://doi.org/10.1038/s43247-025-02320-2.
5. Qiuxia Wu, Xiangyin Ni*, Xinyao Song, **Zihao Chen**, Songbai Hong, Björn Berg, Mianghai Zheng, Ji Chen, Jingjing Zhu, Ling Ai, Yichen Zhang, and Fuzhong Wu*. Substrate and climate determine terrestrial litter decomposition. ***Proceedings of the National Academy of Sciences***, 2025, 122(7): e2420664122. https://doi.org/10.1073/pnas.2420664122.
6. Xiaoyue Zhang, Petr Heděnec, Kai Yue, Xiangyin Ni, Xinyu Wei, **Zihao Chen**, Jing Yang, and Fuzhong Wu*. Global forest gaps reduce litterfall but increase litter carbon and phosphorus release. ***Communications Earth & Environment***, 2024, 5: 288. https://doi.org/10.1038/s43247-024-01453-0.
7. **Zihao Chen**, Xiangyin Ni, Guillaume Patoine, Changhui Peng, Kai Yue, Ji Yuan, Qiuxia Wu, Nico Eisenhauer, Carlos A. Guerra, Roland Bol, Fuzhong Wu*, and G. Geoff Wang. Climate warming accelerates carbon release from foliar litter-A global synthesis. ***Global Change Biology***, 2024, 30(5): e17350. https://doi.org/10.1111/gcb.17350.
8. **Zihao Chen**, Xinyu Wei, Xiangyin Ni, Fuzhong Wu, Shu Liao*. Changing precipitation effect on forest soil carbon dynamics is driven by different attributes between dry and wet areas. ***Geoderma***, 2023, 429: 116279. https://doi.org/10.1016/j.geoderma.2022.116279.
9. Li Zhang, Yulian Yang, Zebin Jiao, **Zihao Chen**, Ya Shen, Yao Liu, Linhui Zhang, Lixia Wang, Sining Liu, Qinggui Wu, Han Li*. Response of soil net nitrogen mineralization to a litter in three subalpine forests. ***Forests***, 2022, 13(4): 597. https://doi.org/10.3390/f13040597.
10. **Zihao Chen**, Zebin Jiao, Yao Liu, Zhengfeng Xu, Bo Tan, Li Zhang*. Influences of seasonal litter input on soil active organic carbon in subalpine forests in western Sichuan. ***China Journal of Applied Environmental Biology***, 2021, 27(3): 594-600. (In Chinese with English abstract). https://link.cnki.net/doi/10.19675/j.cnki.1006-687x.2021.02018.
11. **Zihao Chen**, Ya Shen, Bo Tan, Han Li, Chengming You, Zhengfeng Xu, Xinyu Wei, Xiangyin Ni, Yulian Yang, Li Zhang*. Decreased soil organic carbon under litter input in three subalpine forests. ***Forests***, 2021, 12(11): 1479. https://doi.org/10.3390/f12111479.
12. Xinyu Wei, Yulian Yang, Ya Shen, **Zihao Chen**, Yuliang Dong, Fuzhong Wu*, Li Zhang*. Effects of litterfall on the accumulation of extracted soil humic substances in subalpine forests. ***Frontiers in Plant Science***, 2020, 11: 254. https://doi.org/10.3389/fpls.2020.00254.
13. **Zihao Chen**, Xiaorong Zhang X, Bo Tan, Xinyu Wei, Ya Chen, Yulian Yang, Qinggui Wu, Li Zhang*. Effects of the freeze-thaw cycle on soil enzyme activities in a sub-alpine forest in western Sichuan. ***Acta Ecologica Sinica***. 2020, 40(8): 2662-2669. https://doi.org/10.5846/stxb201902250355.