

**SHENG Dong 盛东**

PhD cand. @ School of Engineering, Westlake University.  
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**RESEARCH INTEREST**

Pollination, Microplastics, Climate Change, Ecosystem Services, Artificial Intelligence, Computer Vision.

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**EDUCATION**

- PhD candidate** in Environmental Sciences & Engineering 2023 Sept – Present  
School of Engineering, Westlake University (joint program with Zhejiang University)  
PI: [Thomas Cherico Wanger](#) & [Ling Li \(李凌\)](#)
- Bachelor of Science** in Environmental Sciences 2019 Sept – 2023 Jun  
College of Environmental & Resource Sciences, Zhejiang University  
General GPA = 3.81/4.00  
Thesis: “Negative effects of microplastics on bumblebees at colony and individual level” (supervised by [Yili Huang](#) and Thomas Cherico Wanger)
- Minor** in Advanced Honor Class of Engineering Education 2020 Sept – 2023 Jun  
Chu Kochen Honors College, Zhejiang University

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**PUBLICATIONS**

- Sheng, D.**, Jing, S., He, X., Klein, A.-M., Köhler, H.-R., & Wanger, T. C. (2024). Plastic pollution in agricultural landscapes: An overlooked threat to pollination, biocontrol and food security. *Nature Communications*, 15(1), 8413. <https://doi.org/10.1038/s41467-024-52734-3>
- Xu, W., Bazegar, S. G., **Sheng, D.**, Toledo-Hernandez, M., Lan, Z., & Wanger, T. C. (2024). Identifying Cocoa Pollinators: A Deep Learning Dataset. arXiv. <https://doi.org/10.48550/ARXIV.2412.19915>
- Darras, K. F. A., Balle, M., Xu, W., Yan, Y., Zakka, V. G., Toledo - Hernández, M., **Sheng, D.**, Lin, W., Zhang, B., Lan, Z., Fupeng, L., & Wanger, T. C. (2024). Eyes on nature: Embedded vision cameras for terrestrial biodiversity monitoring. *Methods in Ecology and Evolution*, 2041-210X.14436. <https://doi.org/10.1111/2041-210X.14436>
- Sheng, D.**, Chen, M., Chen, Q., Huang, Y. (2022). Opposite selection effects of nZVI and PAHs on bacterial community composition revealed by universal and sphingomonads-specific 16SrRNA primers. *Environmental Pollution*, 311, 119893. <https://doi.org/10.1016/j.envpol.2022.119893>

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**PATENTS**

In process: CHN application No. 202311686500.0; US application No. 18/607,745

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**CONFERENCES & PRESENTATIONS**

- Sheng, D., & Wanger, T. C. (2024, August 8). *Latebreaking poster: Long-term exposure to microplastics and heat affects bumblebee colony development, behavior patterns and social networks*. The 2024 Annual Meeting of the Ecological Society of America (ESA), Long Beach, California, US.

## **OTHER EXPERIENCES**

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Visiting student at SASE Lab, Westlake University	2022 May – 2023 Aug
Bioinformatics analysis (supervised by Dr. Yili Huang) at Zhejiang University	2021 Nov – 2022 Sept
Internship at Zhejiang Ecology & Environment Design and Research Institute	2022 Jul – 2022 Sept
Summer session at University of California, Berkeley. Environmental Earth Sciences (ESA20), A-	2021 Aug

## **SELECTED AWARDS**

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Zhejiang University “Outstanding Graduate Student”	2024
Westlake University “Exploration Award”	2024
“Challenge Cup” Provincial College Student Curricular Academic Science and Technology Works Competition (silver award)	2023
Interdisciplinary Contest in Modeling (honorable mention)	2022
Zhejiang University-Jiande Scholarship (second prize)	2021
Zhejiang Province College Physics Innovation (Theory) Competition (first prize)	2020
Zhejiang University Scholarship (second prize)	2019

## **SKILLS**

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Python, MATLAB, R, C/C++, CAD, SolidWorks, SketchUp, etc.