

**SHENG Dong 盛东**

PhD cand. @ School of Engineering, Westlake University.

Email: [sheng-dong@outlook.com](mailto:sheng-dong@outlook.com); [shengdong@westlake.edu.cn](mailto:shengdong@westlake.edu.cn)[Website](#) | ORCID: 0000-0001-5658-5771**RESEARCH INTEREST**

Agroecology, Pollination, Microplastics, Climate Change, Ecosystem Services, Artificial Intelligence, Computer Vision, System modelling

**EDUCATION**

- PhD candidate** in Environmental Sciences & Engineering 2023 Sept – present  
 School of Engineering, Westlake University (joint program with Zhejiang University)  
 Supervisors: 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”  
 Supervisors: Thomas Cherico Wanger & Yili Huang (黄益丽)
- Minor** in Advanced Honor Class of Engineering Education 2020 Sept – 2023 Jun  
 Chu Kochen Honors College, Zhejiang University

**MEMBERSHIPS**

- Student Member | The Ecological Society of America 2024 – present  
 Core Member | The Scientists’ Coalition for an Effective Plastics Treaty 2025 – present

**PUBLICATIONS**

- Xu, W., Barzegar, S. G., **Sheng, D.**, Toledo-Hernández, M., Lan, Z., & Wanger, T. C. (2025). Identifying Cocoa Flower Visitors: A Deep Learning Dataset. *Scientific Data*, 12(1), 1309.  
<https://doi.org/10.1038/s41597-025-05631-3>
- 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>
- 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>

**CONFERENCES & PRESENTATIONS**

- Sheng, D.**, & Wanger, T. C. (2024, August 8). *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.

## PATENTS

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Wanger, T. C., **Sheng, D.**, Wang, L., Yuan, X. (2023). *Detection method and apparatus, object monitoring system, computing device, and storage medium* (CN 120124651 A / US 20250190729 A1). China National Intellectual Property Administration, 2025-06-10 / United States Patent and Trademark Office, 2025-06-12.

## SELECTED HONORS & AWARDS

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Award of Honor for Graduate   Zhejiang University	2024
Exploration Award   Westlake University	2024
Certificate of Chu Kochen Honors Program   Zhejiang University	2023
The 18th Zhejiang Province “Challenge Cup” Academic and Technological Competition for College Students (Silver Award)	2023
Interdisciplinary Contest in Modeling (Honorable Mention)   The Consortium for Mathematics and Its Application	2022
Zhejiang University – Jiande Scholarship (Second Prize)	2021
Zhejiang Province Physics Innovation (Theoretical) Competition for College Students (First Prize)   Zhejiang Physical Society	2020
Zhejiang University Scholarship (Second Prize)	2019

## OTHER EXPERIENCES

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Visiting student   SASE Lab, Westlake University	2022 May – 2023 Aug
Bioinformatics analysis (supervised by Dr. Yili Huang)   Zhejiang University	2021 Nov – 2022 Sept
Internship   Zhejiang Ecology & Environment Design and Research Institute	2022 Jul – 2022 Sept
Summer session   University of California, Berkeley.	2021 Aug
Environmental Earth Sciences (EPS-80), A-	

## SKILLS

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Software: Python, MATLAB, R, C/C++, CAD, SolidWorks, SketchUp  
Experiment: Raman spectrum, optical microscope, basic chemical/biological experiments  
Data analysis: machine learning, computer vision, meta-analysis