

**SHENG Dong 盛东**

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**RESEARCH INTEREST**

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

**EDUCATION****PhD candidate** in Environmental Sciences & Engineering 2023 Sept – Present

School of Engineering, Westlake University (joint program with Zhejiang University)

Supervisors: Thomas Cherico Wanger &amp; Ling Li (李凌)

**Bachelor of Science** in Environmental Sciences 2019 Sept – 2023 Jun

College of Environmental &amp; 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 &amp; Yili Huang (黄益丽)

**Minor** in Advanced Honor Class of Engineering Education 2020 Sept – 2023 Jun

Chu Kochen Honors College, Zhejiang University

**MEMBERSHIPS**

The Ecological Society of America – student member 2024

The Scientists' Coalition for an Effective Plastics Treaty – core member 2025

**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>**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.

## PATENTS

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

## SELECTED HONORS & AWARDS

Award of Honor for Graduate – Zhejiang University	2024
Exploration Award – Westlake University	2024
Certificate of Chu Kochen Honors Program – Zhejiang University	2023
浙江省第十八届“挑战杯”工商银行大学生课外学术科技作品竞赛 银奖	2023
Interdisciplinary Contest in Modeling (honorable mention)	2022
Zhejiang University-Jiande Scholarship (second prize)	2021
浙江省大学生物理创新（理论）竞赛 一等奖	2020
Zhejiang University Scholarship (second prize)	2019

## OTHER EXPERIENCES

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, A-	2021 Aug

## SKILLS

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...