



Yaochun Yu

Assistant Professor of Civil and Environmental Engineering

CONTACT INFORMATION

- **Administrative Contact**

Timothy Tsung - Program Administrator

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Bio

BIO

My research focuses on functional environmental microbiology and environmental analytical chemistry to uncover and harness microorganisms for chemical biotransformation. We integrate high-resolution mass spectrometry, meta-omics sequencing, molecular microbiology and biochemistry, and computational modeling to identify the functional microbes, genes, and enzymes that drive these processes. Building on these mechanistic insights, we aim to develop environmentally benign chemicals and novel biosolutions for bioremediation and waste-to-resource recovery.

I am also interested in how anthropogenic perturbations (i.e., chemical exposure) reshape microbial biodiversity and ecosystem function across natural and engineered ecosystems. We aim to resolve these cause–effect relationships and, using standardized and synthetic microbial communities, run comparable, hypothesis-driven experiments that translate fundamental insights into predictive tools and practical interventions. The aim is to help keep human activities within the safe operating space of planetary boundaries while advancing environmental and public health.

ACADEMIC APPOINTMENTS

- Assistant Professor, Civil and Environmental Engineering
- Member, Bio-X

HONORS AND AWARDS

- Terman Faculty Fellow, Stanford University (2026)
- SDSS Teaching Grant for Excellence and Innovation in Sustainability Education, Stanford Doerr School of Sustainability (2026)
- C. Ellen Gonter Environmental Chemistry Award, American Chemical Society (2019)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Early Career Editorial Advisory Board, Environmental Science & Technology (2025 - present)
- Vice Chair, International Water Association (IWA) Young Water Professionals Switzerland Chapter (2024 - present)

PROFESSIONAL EDUCATION

- Ph.D., University of Illinois Urbana-Champaign, Environmental Science and Engineering (2021)

- M.S., University of Illinois Urbana-Champaign , Environmental Science and Engineering (2017)
- B.Eng., Jilin University , Hydrology and Water Resources Engineering (2015)

LINKS

- Yu Research Group: <https://yulab.stanford.edu/>
- Google Scholar: <https://scholar.google.com/citations?user=hl7mWs0AAAAJ&hl=en>

Teaching

COURSES

2025-26

- Environmental Biotechnology: CEE 271B (Spr)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Marc Foster

Doctoral Dissertation Reader (NonAC)

Marlena Hinkle