

Xinyi Yan

PAT 506B 2415 Speedway, Austin, TX 78712 | xinyiyan@utexas.edu | xinyi-yan.github.io/ | twitter.com/XinyiYan6

Education

University of Texas at Austin, 5th year PhD candidate in EEB (2020 – present; expected 2026)

- Advisors: Dr. Caroline Farrior & Dr. Amelia Wolf
- Portfolio Program in Applied Statistical Modeling

University of California, Los Angeles, B.S. (2016 – 2020)

- Majors in: Applied Mathematics & Biology (Departmental Highest Honors)
- Magna Cum Laude

Peer Reviewed Publications

Zou, H. X., **Yan, X.**, & Rudolf, V. H. (2024) Time-dependent Interaction Modification Generated from Plant-soil Feedback. *Ecology Letters*. <http://doi.org/10.1111/ele.14432>

McGuire, R. M.*, Hayashi, K. T.*, **Yan, X.***, Carita Vaz, M., Cinoğlu, D., Cowen, M. C., ... & Kandlikar, G. S. (2022) EcoEvoApps: Interactive Apps for Teaching Theoretical Models in Ecology and Evolutionary Biology. *Ecology and Evolution*. <http://dx.doi.org/10.1002/ece3.9556> *equal contributors.

Yan, X.*, Levine, J. M., & Kandlikar, G. S.* (2022). A quantitative synthesis of soil microbial effects on plant species coexistence. *Proceedings of the National Academy of Sciences*, 119(22), e2122088119. <https://doi.org/10.1073/pnas.2122088119> *equal contributors.

Kandlikar, G. S., **Yan, X.**, Levine, J. M., & Kraft, N. J. (2021). Soil Microbes Generate Stronger Fitness Differences than Stabilization among California Annual Plants. *The American Naturalist*, 197(1), E30-E39. <https://doi.org/10.1086/711662>

Kandlikar, G. S., Johnson, C. A., **Yan, X.**, Kraft, N. J., & Levine, J. M. (2019). Winning and losing with microbes: how microbially mediated fitness differences influence plant diversity. *Ecology Letters*, 22(8), 1178-1191. <https://doi.org/10.1111/ele.13280>

Available Manuscripts

YAN, X., Bowman, E. Ortiz, S., Cinoglu, D., Farrior, C., & Wolf A. (2025) Plant diversity and water availability have additive effects on soil fungal communities that are linked to plant productivity

Senthilnathan, A., Ke, P. J., **Yan, X.**, Crawford, C., & D'Andrea, R. (2023) Challenges in linking plant-soil feedbacks to community structure. Manuscript available upon request.

Fellowships & Awards

2025 Santa Fe Institute Complexity System Summer School Tuition Scholarship (\$2.9k)

2024 University Graduate Continuing Fellowship, UT Austin (\$36k)

2023 Stengl-Wyer Fellowship, UT Austin (\$36k for stipend + \$2k for research)

2021-2023 Research Award by the Dept. of Integrative Biology, UT Austin (\$7.5k accumulated)
2022 Blattstein Fellowship, UT Austin (\$3k)
2022 Ann Miller Gonzalez Graduate Research Grants, Native Plant Society of Texas (\$2.5k)
2022 Marion Elizabeth Eason Endowed Scholarship, UT Austin (\$1.1k)
2020 Recruitment Fellowship, UT Austin (\$31k)
2019 CALeDNA Summer Research Internship, UCLA (\$3k)
2019 First Place poster at EEB Annual Biology Research Symposiums, UCLA (\$100)
2018 Undergraduate Research Fellow, UCLA (\$2k)

Invited Working Group Participations

Early career working group at the Synthesis Center (sDiv) of German Center for Integrative Biodiversity Research (iDiv). Soil microbial controls over plant coexistence: synthesizing data and theory to unravel context dependence of plant-soil feedbacks under global changes ([sPSF](#)). 2021 – 2024.

Invited Presentation at Conference

YAN, X., Levine, J. M., & Kandlikar, G. Linking theory and global data to evaluate microbial control over plant coexistence. *Organized Oral Session in 2022 ESA+CSEE Annual Meeting* (August 14-19).

Contributed Presentations at Conferences (since graduate school)

YAN, X., Bowman, E. Ortiz, S., Cinoglu, D., Martinez, J., Farrior, C., & Wolf A. The impact of plant diversity and water availability on soil fungal communities, and their subsequent effect on plant productivity. In *2025 ASN Asilomar conference* (Jan 3-7)

YAN, X., Bowman, E. Ortiz, S., Cinoglu, D., Farrior, C., & Wolf A. The effect of plant diversity and water availability on soil fungal communities: A field study. In *2024 ESA Annual Meeting* (August 4-9)

YAN, X., Bowman, E. Ortiz, S., Cinoglu, D., Farrior, C., & Wolf A. The effect of plant diversity and water availability on soil fungal communities: A field study. In *2024 Native Plant Society of Texas Spring Symposium* (March 1)

FARRIOR, C. E., Decker, R. R., Bradly, M. L., Cinoglu, D., & **Yan, X.** Can we predict the evolution of differences among species that allow for their coexistence? In *2022 ESA+CSEE Annual Meeting* (August 14-19).

YAN, X., Levine, J. M., & Kandlikar, G. Quantifying the effect of plant-soil feedbacks on plant coexistence: A meta-analysis of the microbially mediated fitness difference. In *2021 ESA Annual Meeting* (August 2-5).

YAN, X., Kandlikar, G.S., Levine, J. M., & Kraft, J.B. Evaluating the microbial effect on the pairwise and community-wide coexistence of California annual species. In *2020 ESA Annual Meeting* (August 3--6).

KANDLIKAR, G. S., Cowen, M., Hayashi, K., McGuire, R. Vaz, M.C., & **Yan, X.** Interactive web-apps for theoretical ecology active-learning modules. In *2020 ESA Annual Meeting* (August 3--6).

Training & Workshops

2025 Santa Fe Institute [Complexity System Summer School](#) (4 weeks)

Peer Review

Reviewed and co-reviewed 16 papers for 6 journals: **American Journal of Botany** | **Ecological Monographs** | **Ecology** | **Ecology Letters** | **Journal of Ecology** | **New Phytologist**.

Teaching, Mentoring, & Instructional Design

Co-developer/maintainer, *EcoEvoApps*: (May 2020 – present)

- Develop open-source apps that simulate ecological models, available in an [R package](#) and [on the web](#)
- Co-first author of a [research paper](#) on using *EcoEvoApps* in undergraduate EEB education

Undergraduate Mentorship (May 2024 – present)

- Mentoring two UT undergraduate students on fieldwork, molecular work, experimental design, statistical analysis, and academic writing.
- One student received the UT Undergraduate Research Fellowship (\$700) and lead independent research.

Teaching Preparation Series Advanced Certificate, Center for Teaching & Learning (UT Spring semester 2023)

- Completed the semester-long workshop to improve my skills and knowledge on teaching and mentorship

Teaching Assistant, *Introduction to Biology II (BIO311D)*: (UT Fall semester 2021)

- Lead discussions on population genetics, evolution, physiology, ecology, and sustainability

Teaching Assistant, *Biostats (SDS328M)*: (UT Fall semester 2020)

- Teach computer labs on inquiry-based statistical analysis using R

Services

Graduate Council Representative, American Society of Naturalists (Sept. 2022- present)

- Organize events at conferences, design merchandises, and coordinate with the ASN committees to promote DEI and professional developments in graduate students
- Served as a reviewer for the 2023 ASN Student Research Award

Member, Departmental Pre-candidacy Grad Mentoring Working Group (April 2023 – present)

- Organize bi-semester departmental townhall discussions for pre-candidacy students on pre-candidacy activities and milestones

Co-organizer, ‘Ecolunch’ departmental ecology seminar (Aug. 2022 – June 2023)

- Organized and moderated weekly departmental ecology seminars

Outreach & Science Communication

Outreach Lectures at [Neighborhood Science](#) & [Science Under the Stars](#): (Nov. 8th & 10th 2022)

- Introduce to the public how soil microbes influence plant individual growth, assembly of natural communities, and our daily life

Outreach Lecture at [Botany of the Holidays](#), UCLA Mildred E. Mathias Botanical Garden: (Dec. 3rd 2020)

- Introduce the plant garlic and its cultural role Chinese winter holidays

Volunteer Docent, Zilker Botanical Garden: (Feb. 2022 – present)

- Lead garden tours and educational activities (at garden workshops, Roots & Wings Festival, etc.) for schools and the general public

Volunteer & Docent, Science Under the Stars: (Sep. 2022 – present)

- Lead public tours around the Brackenridge Field Laboratory; help with set-up of SUTS talks

Volunteer Docent, UCLA Mildred E. Mathias Botanical Garden: (Dec. 2018 – June 2020)

- Lead educational garden tours for schools and the general public