

CHANG-YU CHANG 張昌祐



PROFESSIONAL APPOINTMENT AND EDUCATION

- 2022- **Postdoctoral Fellow**, University of Pennsylvania
Data Driven Discovery Postdoctoral Fellow. Advisor: Dr. Corlett W. Wood
- 2017-2022 **Ph.D.**, Ecology and Evolutionary Biology, Yale University
Advisor: Dr. Alvaro Sanchez
- 2015-2017 **M.S.**, Ecology and Evolutionary Biology, National Taiwan University
Advisor: Dr. Sheng-Feng Shen
- 2011-2015 **B.S.**, Life Science, National Taiwan University
Presidential and Dean's Award (ranking top 5% in the class) GPA: 4.1/4.3



PUBLICATIONS

* these authors contributed equally; # corresponding authors

- 2024 Little population divergence of a facultative plant symbiont
In prep
Chang-Yu Chang#, Terrence Topping-Brown, Jazmine Rud, Gerardo Bencosme, McCall Calvert, Corlett Wood#
- 2023 Emergent coexistence in multispecies microbial communities
[Science](#)
Chang-Yu Chang#, Djordje Bajic#, Sylvie Estrela, Jean Vila, Alvaro Sanchez#
- 2022 Top-down and bottom-up cohesiveness in microbial community coalescence
[PNAS](#)
Juan Diaz-Colunga*, Nanxi Lu*, Alicia Sanchez-Gorostiaga*, Chang-Yu Chang, Helen Cai, Joshua Goldford, Mikhail Tikhonov, Alvaro Sanchez#
- 2022 Functional attractors in microbial community assembly
[Cell Systems](#)
Sylvie Estrela#, Jean C C Vila, Nanxi Lu, Djordje Bajic, Maria Rebolleda-Gomez, Chang-Yu Chang, Joshua E. Goldford, Alicia Sanchez-Gorostiaga, Alvaro Sanchez#
- 2021 Engineering complex communities by directed evolution
[Nature Ecology & Evolution](#)
Chang-Yu Chang*, Jean C C Vila*, Madeline Bender, Richard Li, Madeleine C Mankowski, Molly Bassette, Julia Borden, Stefan Golfier, Paul Gerald L Sanchez, Rachel Waymack, Xinwen Zhu, Juan Diaz-Colunga, Sylvie Estrela, Maria Rebolleda-Gomez, Alvaro Sanchez#
- 2021 Directed Evolution of Microbial Communities
[Annual Review of Biophysics](#)
Alvaro Sanchez#, Jean C C Vila, Chang-Yu Chang, Juan Diaz-Colunga, Sylvie Estrela, Maria Rebolleda-Gomez
- 2020 Artificially selecting bacterial communities using propagule strategies
[Evolution](#)
Chang-Yu Chang*, Melisa L Osborne*, Djordje Bajic, Alvaro Sanchez#
- 2018 Ecological effects of cellular computing in microbial populations
[Natural Computing](#)
Maia Baskerville*, Arielle Biro*, Mike Blazanin*, Chang-Yu Chang*, Amelia Hallworth*, Nicole Sonner*, Jean C C Vila*, Alvaro Sanchez#

CONTACT INFO

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- 🐙 [GitHub](#)
- 👤 [Google Scholar](#)
- 🌐 [Personal Website](#)

[GitHub source code](#)

Updated on 2024-07-08

GRANTS, FELLOWSHIPS, AND AWARDS

- 2022-2024 Data Driven Discovery Postdoctoral Fellow (\$27,500)
University of Pennsylvania
- 2017-2020 Government Fellowship for Oversea Study (\$126,000)
Taiwan Ministry of Education

INVITED SEMINARS

- 2023 Institute of Ecology and Evolutionary Biology, National Taiwan University
Seminar
- 2023 Biodiversity Research Center, Academia Sinica
Seminar
- 2021 Princeton University
Seminar
- 2021 University of Pennsylvania
Seminar
- 2021 International Centre for Theoretical Physics
Workshop on Limits to Diversity Assembly
- 2020 Microbial Sciences Institute, Yale University
Graduate student SMAL talks

CONTRIBUTED PRESENTATIONS

- 2023 Evolution 2023. *Contributed talk*
- 2023 ASN Asilomar 2023. *Contributed talk*
Honorable mention postdoc presentation
- 2022 Connections Across Borders - Microbial Ecology Conference. *Contributed talk*
Travel grant \$250; Yale GSA CTF grant \$750
- 2022 Evolution 2022. *Contributed talk*
- 2019 The Graduate Research in Ecology, Behavior, and Evolution Annual
Symposium (GREBE). *Contributed talk*
- 2019 Microbial Sciences Institute Retreat, Yale University. *Contributed poster*
- 2019 Yale EEB graduate student symposium. *Contributed poster*
Best contributed poster
- 2018 17th International Symposium on Microbial Ecology (ISME). *Contributed poster*
- 2017 18th Congress of Animal Behavior and Ecology, Taiwan. *Contributed talk*
Winner Prize for oral presentation
- 2016 15th Congress of the International Society for Behavioral Ecology (ISBE).
Contributed talk
- 2016 Graduate student symposium, National Taiwan University. *Contributed poster*
Best contributed poster



TEACHING AND MENTORING

- 2022-
University of Pennsylvania
Guest lecturer, Evolution
Undergrad mentor (Nehemias Abundo Quiroz)
Undergrad thesis mentor (Jazmine Rud)
- 2019-2020
Yale University
TA, E&EB729: Microbial Ecology and Evolution
TA, BIOL104: Ecology & Evolutionary Biology
TA, EEB250/550: Biology Of Terrestrial Arthropods
TA, EEB251L/551L: Laboratory for Biology Of Terrestrial Arthropods
TA, EEB223L/523L: Laboratory for Evolution & Functional Traits
Undergrad thesis mentor (Helen Cai)
- 2019
Marine Biological Laboratory
TA, PBoC2019: Physical Biology of the Cell summer course
- 2015-2016
National Taiwan University
TA, LS3022: Biostatistics
TA, LS1019: General Botany Lab



SERVICE

- Manuscript reviewer** for journals:
Ecology Letters, Ecology, ISciences, Nature Communications, Plant and Soil, Ecography
- 2023-2024
Co-chair of postdoc events, UPenn Biology Department
Coordinated the postdoc social events and meetings
- 2022
Bilingual mentor, Evolution 2022
Guided non-native English-speaking students in preparing their presentations
- 2018-2020
President, Yale Taiwanese Student Association
Organized recreational and holiday events for Taiwanese students
Facilitated connections among Taiwanese students across universities
- 2019
Organizer, Yale EEB Hutchinson speaker
Dr. Dolph Schluter (UBC) invited as the 2019 Hutchinson Speaker
Organized and modulated invited speaker talks, sessions, and meetings



REFERENCES

- Dr. Corlett W. Wood
Postdoc advisor
Assistant Professor, University of Pennsylvania
corlett@sas.upenn.edu
- Dr. Alvaro Sanchez
Ph.D. advisor
Principal investigator, Centro Nacional de Biotecnologia, Spain
alvaro.sanchez@usal.es
- Dr. Maria Rebolleda-Gomez
Dissertation committee
Assistant Professor, University of California, Irvine
mrebol1@uci.edu