

CHANG-YU CHANG 張昌祐



PROFESSIONAL APPOINTMENT AND EDUCATION

- 2022- **Postdoctoral Fellow**, University of Pennsylvania
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

- 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](#)

The [source code](#) on GitHub

Last updated on 2023-10-31.

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

TEACHING AND MENTORING

- 2020- ● Undergraduate Mentorship: Helen Cai (Yale), Jazmine Rud (Penn), Nehemias Abundo Quiroz (Penn)
- 2023- ● Postdoc mentor, Freshmen Exposure to Research in Biological Science (FERBS)
- 2022 ● Bilingual mentor, Evolution 2022
- 2020 ● BIOL104: Ecology & Evolutionary Biology, Yale University
- 2019 ● E&EB729: Microbial Ecology and Evolution, Yale University
- 2019 ● PBoC2019: Physical Biology of the Cell course, Marine Biological Laboratory
- 2019 ● EEB250/550: Biology Of Terrestrial Arthropods, Yale University
- 2019 ● EEB251L/551L: Laboratory for Biology Of Terrestrial Arthropods, Yale University
- 2019 ● EEB223L/523L: Laboratory for Evolution & Functional Traits, Yale University
- 2016 ● LS3022: Biostatistics, National Taiwan University
- 2015 ● LS1019: General Botany Lab, National Taiwan University

INVITED SEMINARS

- 2023 Sep ● Institute of Ecology and Evolutionary Biology, National Taiwan University
- 2023 Sep ● Biodiversity Research Center, Academia Sinica
- 2023 Mar ● Guest lecture in Evolution, UPenn
- 2021 Nov ● Princeton University. Lab-invited seminar
- 2021 Nov ● University of Pennsylvania. Lab-invited seminar
- 2021 Jan ● Workshop on Limits to Diversity Assembly, ICTP

2020 Oct ● Microbial Sciences Institute SMAL talks, Yale University



CONTRIBUTED PRESENTATIONS

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



SERVICES

- 2023- ● Co-chair of postdoc events, UPenn Biology Department




Coordinated the postdoc social events and meetings
- **Manuscript reviewer** for Ecology Letters, Ecology, ISciences, Nature Communications
- 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  corlett@sas.upenn.edu
Assistant Professor, University of Pennsylvania
- Dr. Alvaro Sanchez
Ph.D. advisor  alvaro.sanchez@cnb.csic.es
Principal investigator, Centro Nacional de Biotecnologia, Spain
- Dr. Maria Rebolleda-Gomez
Dissertation committee  mreboll1@uci.edu
Assistant Professor, University of California, Irvine