

# Chang-Yu Chang

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Microbial Science Institute Room 215, 840 West Campus Drive, West Haven, CT 06516

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## Current position

*PhD student*

Department of Ecology and Evolutionary Biology, Yale University 2017-onward

Advisor: Alvaro Sanchez, PhD

## Education

*National Taiwan University*, M.Sc in Ecology and Evolutionary Biology 2015-2017

*National Taiwan University*, B.Sc in Life Science (dean's award) 2011-2015

## Research Experience

*Yale University*, first rotation. 2017

Advisor: Alvaro Sanchez, PhD

Function and Structure of a Frequently Immigrated Microbial Community.

*National Taiwan University*, undergraduate and master research. 2013-2016

Advisor: Sheng-Feng Shen, PhD

Near-infrared modulates burying behavior in burying beetles.

## Publications

*Journal Articles*

Maia Baskerville, Arielle Biro, Mike Blazanin, **Chang-Yu Chang**, Amelia Hallworth, Nicole Sonnert, Jean C. C. Vila, Alvaro Sanchez (2018). Ecological effects of cellular computing in microbial populations. *Natural Computing* **17**(4), 811–822. [Link](#)

## Research Interests

Microbial community assembly

Nonlinear dynamics and complex system

R statistics

## Academic Skills

### *Experiment*

Animal behavior: insect behavioral manipulation, field video record, insect brain dissection, pitfall trap.

Optical instruments: spectrometer, spectroradiometer, leaf transmittance, modelling of atmospheric radiative transfer of sunshine.

Microbiology: high-throughput culture environment, robotic arm.

### *Computer*

R: `rmarkdown`, `tidyverse`, `data.table`, `ggplot2`, `blogdown`.

Statistics: basic statistics, resampling methods, cross validation, general linear regression.

Bash/Python/Mathematica/Matlab: basics.

### *Language*

English, Mandarin (mother-tongue), Japanese.

## Teaching Experience (TA)

### *Yale University*

Laboratory for Evolution & Functional Traits

2019 Spring

### *National Taiwan University*

Biostatistics

2016 Fall

General Botany Lab.

2015 Fall

## Conference Presentations

2018 Microbial Eco-Evolutionary Dynamics, Oeiras, Portugal (*Poster*)

2018 17<sup>th</sup> International Society for Microbial Ecology, Leipzig, Germany (*Poster*)

2016 16<sup>th</sup> International Behavioral Ecology Congress, Exeter, UK (*Talk*)

## Grant Support

2017-2020 Fellowship: *Government Fellowship for Oversea Study*. PhD student. Taiwan Ministry of Education. \$12,6000.

2016 Travel fund: *MOE Travel Fund for Graduate Student Attending International Conference*. Master Student. Taiwan Ministry of Education. \$1000.

## **Extracurricular Activities and Leaderships**

- Organizer of Scientific Affairs Department, NTU Life Science Camp** 2014  
Managing all procedures of two experimental lessons; inviting two professors to give popular science speeches
- Speaker of Experimental Lesson, NTU Life Science Camp** 2013  
Lecturing students on the basic knowledge about insect
- Captain, Men's Volleyball Team of Life Science Department** 2013-2014
- Vice President, NTU Life Science Welcome Camp** 2012  
Organizing and allocating 50 people to corporate assignments