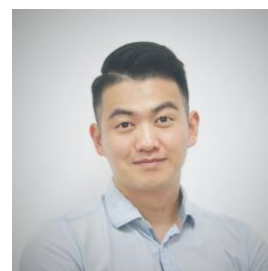


# CURRICULUM VITAE

Chuan Ku (顧銓)

September 22, 2021



Birth: 1987 in Taipei County, Taiwan  
Citizenship: Taiwan  
Institution: Institute of Plant and Microbial Biology (IPMB)  
Academia Sinica, Taipei, Taiwan  
Position: Assistant Research Fellow / Assistant Professor  
E-mail address: chuanku@gate.sinica.edu.tw  
Lab website: <https://chuanku-lab.github.io/kulab/>

## Professional Profile

### Education

- 2013–2016 Dr. rer. nat. in Biology (*summa cum laude*), Heinrich Heine University Düsseldorf, Germany (dissertation title: “On the prokaryotic origins of eukaryotic genes”)
- 2009–2011 M.Sc. in Ecology and Evolutionary Biology (thesis title: “Identification of *Ardisia* (Myrsinaceae) leaf-nodule symbionts and cophylogenetic analyses of plant-bacteria symbiosis”) and Certificate in Mandarin-English Translation and Interpretation, National Taiwan University, Taiwan
- 2005–2009 B.Sc. in Life Science with a minor degree in Geosciences, National Taiwan University, Taiwan

### Professional experience

- 2020– Adjunct Assistant Professor, Institute of Ecology and Evolutionary Biology, National Taiwan University, Taiwan
- 2020– Jointly Appointed Assistant Professor, Genome and Systems Biology Degree Program, National Taiwan University and Academia Sinica, Taiwan
- 2019– Adjunct Assistant Professor, Department of Life Science, National Taiwan Normal University, Taiwan
- 2019– Adjunct Assistant Professor, Biotechnology Center, National Chung Hsing University, Taiwan
- 2019– Assistant Research Fellow, Institute of Plant and Microbial Biology, Academia Sinica, Taiwan
- 2016–2018 Postdoctoral fellow, Department of Plant and Environmental Sciences, Weizmann Institute of Science, Israel

- 2016 Postdoctoral fellow, Institute of Molecular Evolution, Heinrich Heine University Düsseldorf, Germany
- 2012–2013 Research assistant, Institute of Plant and Microbial Biology, Academia Sinica, Taiwan
- 2011–2012 Personnel officer, Reserve Command, Ministry of National Defense, Taiwan
- 2010–2012 Part-time English-Mandarin translator, Linguitronics Co., Taiwan

### **Awards and scholarships**

- 2021–2023 Young Scholar Award, Foundation for the Advancement of Outstanding Scholarship, Taiwan (傑出人才發展基金會年輕學者創新獎)
- 2020–2025 Academia Sinica Career Development Award with research funding for 2021–2025
- 2017–2018 European Molecular Biology Organization (EMBO) Long-Term Fellowship for postdoctoral fellows (ALTF 1172-2016)
- 2017 2016 Best Dissertation Award, Faculty of Mathematics and Natural Sciences, Heinrich Heine University Düsseldorf, Germany
- 2016 Koshland Prize for postdoctoral fellows, Weizmann Institute of Science, Israel
- 2016 Dean of Faculty Fellowship, Weizmann Institute of Science, Israel
- 2016 Young Investigator Travel Award, Annual Meeting of the Society for Molecular Biology & Evolution (SMBE) 2016, Gold Coast, Australia
- 2016 Funded Visit Program for PhD students, Weizmann Institute of Science, Israel
- 2015 Travel Grant for Volkswagenstiftung “Kick-off Conference: Life? – A New Funding Initiative Introduces Itself,” Hanover, Germany
- 2013–2016 Research scholarship for foreign doctorate students and young academics, German Academic Exchange Service (DAAD), Germany
- 2011 Distinguished Master’s Thesis Award, Taiwan Society of Plant Biologists, Taiwan
- 2011 Dean Award for outstanding performance in study, College of Life Science, National Taiwan University, Taiwan
- 2008 Undergraduate Research Scholarship, National Science Council, Taiwan
- 2007 Scholarship for further academic study and training in Germany, German Academic Exchange Service (DAAD), Germany
- 2005–2009 Presidential Awards for bachelor’s students, National Taiwan University, Taiwan

### **Participation in workshops and courses**

- 2018 EMBO Lab Leadership for Postdocs (September 3 – 5, 2018), Heidelberg, Germany
- 2017 EMBO Practical Course – Single Cell Omics (April 24 – April 30, 2017), Heidelberg, Germany (selected attendee; oral and poster presentation)

2016 Hjort Summer School 2016: Microbial Oceanography – Complexity vs. Simplicity in Microbial Ecology (August 29 – September 2, 2016), Bergen, Norway (selected attendee; oral and poster presentation)

## Language proficiency

Mandarin (native), English (fluent), German (near-fluent)

English:

2012 TOEFL iBT: Total 115/120 (Reading 30/30, Listening 30/30, Speaking 28/30, Writing 27/30)

2010 Certificate of Competency in Chinese and English Translation and Interpretation (examination in *English to Chinese Translation: General Topics*), Ministry of Education, Taiwan

German:

2012 TestDaF: Reading 5/5, Listening 4/5, Speaking 4/5, Writing: 4/5

## Media coverage

- 12/2020 Interview and promotional video by DAAD Taiwan ([in Mandarin/German](#))
- 11/2020 Perspective on a Nature paper ([reported by Science](#))
- 10/2020 DAAD Info Session on PhD research ([in Mandarin](#))
- 09/2020 Interview by Radio Taiwan International ([in German](#))
- 07/2020 Short Alumnus Speech on the 20<sup>th</sup> Anniversary of DAAD Taiwan ([in German](#))
- 11/2019 PI interview, Institute of Plant and Microbial Biology ([in Mandarin](#))
- 01/2019 Introduction to new PI, Academia Sinica ([in Mandarin](#))
- 09/2016 Best Dissertation Award, Heinrich Heine University Düsseldorf ([in German](#))
- 09/2015 Report by German Academic Exchange Service ([in German](#))

## Researcher profiles

[ResearchGate](#)

[ResearcherID](#)

[ORCID](#)

[Google Scholar](#)

[Publons](#)

## Research and Communication

### Research interests

- Evolution and ecology of eukaryotic microbes
- Microalgae
- Giant viruses
- Genome evolution and regulation
- Phylogenetics and systematics
- Eukaryote origin and early evolution
- Lateral gene transfer
- Organelle genomics
- Single-cell omics
- Symbiosis and other microbial interactions

### Publications (#Corresponding author)

25. Tsu-Wang Sun, **Chuan Ku**<sup>#</sup> (2021): Unraveling gene content variation across eukaryotic giant viruses based on network analyses and host associations. *Virus Evolution* : veab081 DOI: 10.1093/ve/veab081
24. **Chuan Ku**<sup>#</sup> (2021): Giant virus-eukaryote interactions as ecological and evolutionary driving forces. *mSystems* 6(4): e00737-21. DOI: 10.1128/mSystems.00737-21
23. Tsu-Wang Sun, Chia-Ling Yang, Tzu-Tong Kao, Tzu-Haw Wang, Ming-Wei Lai, **Chuan Ku**<sup>#</sup> (2020): Host range and coding potential of eukaryotic giant viruses. *Viruses* 12(11): 1337. DOI: 10.3390/v12111337
22. **Chuan Ku**, Uri Sheyn, Arnau Sebé-Pedrós, Shifra Ben-Dor, Daniella Schatz, Amos Tanay, Shilo Rosenwasser, Assaf Vardi (2020): A single-cell view on alga-virus interactions reveals sequential transcriptional programs and infection states. *Science Advances* 6(21): eaba4137. DOI: 10.1126/sciadv.aba4137
21. **Chuan Ku**<sup>#</sup>, Tsu-Wang Sun (2020): Did giant and large dsDNA viruses originate before their eukaryotic hosts? *Proceedings of the National Academy of Sciences of the United States of America* 117(6): 2747-2748. DOI: 10.1073/pnas.1919860117
20. **Chuan Ku**<sup>#</sup>, Arnau Sebé-Pedrós<sup>#</sup> (2019): Using single-cell transcriptomics to understand functional states and interactions in microbial eukaryotes. *Philosophical Transactions of the Royal Society B* 374(1786): 20190098. DOI:10.1098/rstb.2019.0098
19. **Chuan Ku**, Uri Sheyn, Arnau Sebé-Pedrós, Shifra Ben-Dor, Daniella Schatz, Amos Tanay, Shilo Rosenwasser, Assaf Vardi (2019): Tracking infection dynamics at single-cell level reveals highly-resolved expression programs of a large virus infecting algal blooms. *bioRxiv*. DOI:10.1101/757542 (a modified version of this preprint is published as *Science Advances* 6(21): eaba4137)
18. **Chuan Ku**, Noa Barak-Gavish, Mark Maienschein-Cline, Stefan J. Green, Assaf Vardi (2018): Complete genome sequence of *Sulfitobacter* sp. strain D7, a virulent bacterium

isolated from an *Emiliania huxleyi* algal bloom in the North Atlantic. *Microbiology Resource Announcements* 7(19): e01379-18. DOI:10.1128/MRA.01379-18

17. Noa Barak-Gavish, Miguel Frada, **Chuan Ku**, Peter A. Lee, Giacomo R. DiTullio, Sergey Malitsky, Asaph Aharoni, Stefan J. Green, Ron Rotkopf, Elena Kartvelishvily, Uri Sheyn, Daniella Schatz, Assaf Vardi (2018): Bacterial virulence against an oceanic bloom-forming phytoplankter is mediated by algal DMSP. *Science Advances* 4(10): eaau5716. DOI: 10.1126/sciadv.aau5716
16. William F. Martin, Mayo Roettger, **Chuan Ku**, Sriram G. Garg, Shijulal Nelson-Sathi, Giddy Landan (2017): Late mitochondrial origin is an artefact. *Genome Biology and Evolution* 9(2): 373-379. DOI:10.1093/gbe/evx027
15. **Chuan Ku**<sup>#</sup>, William F. Martin<sup>#</sup> (2016): A natural barrier to lateral gene transfer from prokaryotes to eukaryotes revealed from genomes: the 70% rule. *BMC Biology* 14:89. DOI:10.1186/s12915-016-0315-9 (recommended by Faculty of 1000: <http://f1000.com/prime/726862983>)
14. **Chuan Ku**, Shijulal Nelson-Sathi, Mayo Roettger, Filipa L. Sousa, Peter J. Lockhart, David Bryant, Einat Hazkani-Covo, James O. McInerney, Giddy Landan, William F. Martin (2015): Endosymbiotic origin and differential loss of eukaryotic genes. *Nature* 524:427-432. DOI:10.1038/nature14963 (recommended by Faculty of 1000: <http://f1000.com/prime/725729035>)
13. **Chuan Ku**, Shijulal Nelson-Sathi, Mayo Roettger, Sriram Garg, Einat Hazkani-Covo, William F. Martin (2015): Endosymbiotic gene transfer from prokaryotic pangenomes: Inherited chimerism in eukaryotes. *Proceedings of the National Academy of Sciences of the United States of America* 112(33): 10139-10146. DOI:10.1073/pnas.1421385112
12. **Chuan Ku**, Mayo Roettger, Verena Zimorski, Shijulal Nelson-Sathi, Filipa L. Sousa, William F. Martin (2014): Plastid origin: Who, when and why? *Acta Societatis Botanicorum Poloniae* 83(4):281-289 DOI:10.5586/asbp.2014.045
11. Verena Zimorski, **Chuan Ku**, William F. Martin, Sven B. Gould (2014): Endosymbiotic theory for organelle origins. *Current Opinion in Microbiology* 22:38-48. DOI:10.1016/j.mib.2014.09.008
10. **Chuan Ku**, Wen-Sui Lo, Chih-Horng Kuo (2014): Molecular evolution of the actin-like MreB protein gene family in wall-less bacteria. *Biochemical and Biophysical Research Communications* 446(4):927-932. DOI:10.1016/j.bbrc.2014.03.039
9. Tean-Hsu Chang, Wen-Sui Lo, **Chuan Ku**, Ling-Ling Chen, Chih-Horng Kuo (2014): Molecular evolution of the substrate utilization strategies and putative virulence factors in mosquito-associated *Spiroplasma* species. *Genome Biology and Evolution* 6(3): 500-509. DOI:10.1093/gbe/evu033
8. **Chuan Ku**, Wen-Sui Lo, Ling-Ling Chen, Chih-Horng Kuo (2014): Complete genome sequence of *Spiroplasma apis* B31T (ATCC 33834), a bacterium associated with May disease of honeybees (*Apis mellifera*). *Genome Announcements* 2(1): e01151-13. DOI:10.1128/genomeA.01151-13
7. **Chuan Ku**, Jer-Ming Hu (2014): Phylogenetic and cophylogenetic analyses of the leaf-nodule symbiosis in *Ardisia* subgenus *Crispardisia* (Myrsinaceae): Evidence from nuclear and chloroplast markers and bacterial *rrn* operons. *International Journal of Plant Sciences* 175(1):92-109. DOI:10.1086/673306

6. **Chuan Ku**, Wen-Sui Lo, Chih-Horng Kuo (2013): Horizontal transfer of potential mobile units in phytoplasmas. *Mobile Genetic Elements* 3(5):e26145. DOI:10.4161/mge.26145
5. Wen-Sui Lo, **Chuan Ku**, Ling-Ling Chen, Tean-Hsu Chang, Chih-Horng Kuo (2013): Comparison of metabolic capacities and inference of gene content evolution in mosquito-associated *Spiroplasma diminutum* and *S. taiwanense*. *Genome Biology and Evolution* 5(8):1512-1523. DOI:10.1093/gbe/evt108
4. **Chuan Ku**, Wan-Chia Chung, Ling-Ling Chen, Chih-Horng Kuo (2013): The complete plastid genome sequence of Madagascar periwinkle *Catharanthus roseus* (L.) G. Don: Plastid genome evolution, molecular marker identification, and phylogenetic implications in asterids. *PLoS ONE* 8(6):e68518. DOI:10.1371/journal.pone.0068518
3. **Chuan Ku**, Wen-Sui Lo, Ling-Ling Chen, Chih-Horng Kuo (2013): Complete genomes of two dipteran-associated spiroplasmas provided insights into the origin, dynamics, and impacts of viral invasion in *Spiroplasma*. *Genome Biology and Evolution* 5(6):1151-1164. DOI:10.1093/gbe/evt084
2. **Chuan Ku**, Jer-Ming Hu, Chih-Horng Kuo (2013): Complete plastid genome sequence of the basal asterid *Ardisia polysticta* Miq. and comparative analyses of asterid plastid genomes. *PLoS ONE* 8(4):e62548. DOI:10.1371/journal.pone.0062548
1. **Chuan Ku**, Liang-Chi Wang, Su-Hwa Chen (2012): Dispersal of airborne pollen in Chatienshan nature reserve, northern Taiwan, with emphasis on Taiwan beech. *Taiwania* 57(4):331-341.

## Outreach articles

1. **Chuan Ku**, Bo-Wei Wang (2020): 海中的盔甲浮游植物 [Armored Marine Phytoplankton]. *MiTalkzine* 6:8-14. (in Mandarin)

## Presentations at scientific meetings

20. **Chuan Ku**. Genome content evolution in giant viruses of eukaryotes. 2020 Multi-Omics and Precision Medicine Joint Conference (November 14-15, 2020), Chang Gung University, Taoyuan, Taiwan.
19. **Chuan Ku**. A single-cell view on alga-virus interactions reveals sequential transcriptional programs and infection states. American Society for Virology 39<sup>th</sup> Annual Meeting (June 13-17, 2020), Fort Collins, Colorado, USA. (abstract accepted for oral presentation; meeting cancelled due to Wuhan coronavirus pandemic; this talk was presented on June 17 as part of the online ASV Virtual Workshop)
18. **Chuan Ku**. Gene sharing patterns of giant eukaryotic viruses contradict core gene phylogenies. American Society for Virology 39<sup>th</sup> Annual Meeting (June 13-17, 2020), Fort Collins, Colorado, USA. (abstract accepted for poster presentation; meeting cancelled due to Wuhan coronavirus pandemic)
17. **Chuan Ku**. Single-cell transcriptomics: understanding viral infection at high resolution. 2019 Taiwan Society of Plant Biologists Annual Meeting (November 23-24, 2019), Taipei, Taiwan. (oral)

16. **Chuan Ku.** Single-cell RNA-seq for microbial eukaryotes: insights into infection of a cosmopolitan alga by its large DNA virus. Fourth Microbial Single Cell Genomics Workshop (September 22-26, 2019), Boothbay Harbor, USA. (oral)
15. **Chuan Ku.** Single-cell transcriptomic dynamics of a large virus infecting a cosmopolitan alga. 2019 EMBO Fellows' Meeting (June 12-16, 2019), Heidelberg, Germany. (oral)
14. **Chuan Ku.** Single-cell transcriptomic dynamics of a large virus infecting a cosmopolitan alga. 2019 Taiwan Society of Microbial Ecology Annual Meeting (May 11, 2019), Taichung, Taiwan. (oral)
13. **Chuan Ku.** Dynamics of viral infection in the ocean at the single-cell level. 17<sup>th</sup> International Symposium on Microbial Ecology (August 12-17, 2018), Leipzig, Germany. (poster)
12. **Chuan Ku.** Highly resolved transcriptomic dynamics of a large DNA virus at the single-cell level. Israel Society for Microbiology Annual Meeting (July 3-4, 2018), Be'er Sheva, Israel. (oral)
11. **Chuan Ku.** Single-cell transcriptomics of host and virus dynamics in the ocean. Single Cell Genomics 2017 (October 16-18, 2017), Rehovot, Israel. (poster)
10. **Chuan Ku.** Defining viral infection states of a bloom-forming marine alga with single-cell dual RNA sequencing. International Phycological Congress 2017 (August 13-18, 2017), Szczecin, Poland. (oral)
9. **Chuan Ku.** Endosymbiotic origin and differential loss of eukaryotic genes. Society of Molecular Biology and Evolution SMOB 2016 (July 3-7, 2016), Gold Coast, Australia. (oral)
8. **Chuan Ku.** Bacterial origins of eukaryotic genes. Gordon Research Conference: Marine Microbes (June 19-24, 2016), Girona, Spain. (poster)
7. **Chuan Ku.** Endosymbiotic origin and differential loss of eukaryotic genes. Bilateral Workshop Germany-Japan (March 22-23, 2016), National Institute of Genetics, Mishima, Japan. (oral)
6. **Chuan Ku,** Shijulal Nelson-Sathi, Mayo Roettger, Filipa L. Sousa, Peter J. Lockhart, David Bryant, Einat Hazkani-Covo, James O. McInerney, Giddy Landan, William F. Martin. Endosymbiotic origin and differential loss of eukaryotic genes. Volkswagenstiftung "Kick-off Conference: Life? - A New Funding Initiative Introduces Itself" (December 17-18, 2015), Hanover, Germany. (poster)
5. **Chuan Ku,** Shijulal Nelson-Sathi, Mayo Roettger, Filipa L. Sousa, William F. Martin. Endosymbiotic gene transfer in light of prokaryotic genome evolution. SMOB 2015 (July 12-16, 2015), Vienna, Austria. (poster)
4. **Chuan Ku,** Mayo Roettger, Shijulal Nelson-Sathi, Filipa L. Sousa, William F. Martin. On the endosymbiotic origin of eukaryotic genes and apparent transfers from multiple prokaryotic sources. Sackler colloquium "Symbioses becoming permanent: The origins and evolutionary trajectories of organelles" (October 15-17, 2014), Irvine, USA. (poster)
3. **Chuan Ku,** Wen-Sui Lo, Ling-Ling Chen, Chih-Horng Kuo. Complete genome sequences of two dipteran-associated *Spiroplasma* species provided insights into the viral invasion of *Spiroplasma* genomes. SMOB 2013 (July 7-11, 2013), Chicago, USA. (poster)

2. **Chuan Ku** and Jer-Ming Hu. Identification of *Ardisia* (Myrsinaceae) leaf-nodule endosymbionts and cophylogenetic analyses of plant-bacteria symbiosis. 27<sup>th</sup> Annual Meeting of the Taiwan Society of Plant Biologists (November 13, 2010), Nantou, Taiwan. (oral)
1. **Chuan Ku** and Su-Hwa Chen. Comparison of SEM microscopic structure of *Fagus L.* (Fagaceae) pollen from extant and fossil samples in Taiwan. 28<sup>th</sup> Symposium of the Microscopy Society of Taiwan (June 21, 2008), Taichung, Taiwan. (oral)

### **Invited talks**

- |         |                                                                                                                                                                                                                                               |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12/2020 | “Exploring genome evolution in giant viruses,” IPMB Faculty Seminar, IPMB, Academia Sinica, Taipei, Taiwan.                                                                                                                                   |
| 10/2020 | “My research experience in Germany,” DAAD and MOST Info Sessions on Education in Germany, GIS NTU Convention Center, Taipei, Taiwan. Host: Dr. Josef Goldberger.                                                                              |
| 03/2020 | “Giant viruses: From single-cell transcriptomics to genome evolution,” Department of Life Science, National Tsing Hua University, Hsinchu, Taiwan. Host: Dr. Gene Ng.                                                                         |
| 12/2019 | “Microbial eukaryotes: From genome evolution to viral infection,” Department of Life Science, National Taiwan University, Taipei, Taiwan. Host: Dr. Kuan-Hung Lin.                                                                            |
| 11/2019 | “Microbial eukaryotes: From genome evolution to viral infection,” Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan. Host: Dr. Chi-Chou Chiu.                                             |
| 06/2019 | “Highly resolved expression programs revealed by single-cell RNA-seq of a large virus infecting a bloom-forming alga,” Department of Plant and Environmental Sciences, Weizmann Institute of Science, Rehovot, Israel. Host: Dr. Assaf Vardi. |
| 09/2018 | “Evolutionary origins of eukaryotic genes and the eukaryote-prokaryote divide,” National Museum of Natural Science, Taichung, Taiwan. Host: Dr. Yu-Ling Huang.                                                                                |
| 09/2018 | “Evolutionary origins of eukaryotic genes and the eukaryote-prokaryote divide,” Institute of Ecology and Evolutionary Biology, Taipei, Taiwan. Host: Dr. Cheng-Ruei Lee.                                                                      |
| 04/2016 | “Endosymbiotic origin and differential loss of eukaryotic genes,” Department of Plant and Environmental Sciences, Weizmann Institute of Science, Rehovot, Israel. Host: Dr. Assaf Vardi.                                                      |
| 09/2015 | “Origins of eukaryotic genes,” Biodiversity Research Center, Academia Sinica, Taipei, Taiwan. Host: Dr. Shu-Miaw Chaw.                                                                                                                        |

### **Competitive grant funding**

Research grants:

- |           |                                                                         |
|-----------|-------------------------------------------------------------------------|
| 2021–2025 | AS-CDA-110-L01, Career Development Award grant, Academia Sinica, Taiwan |
|-----------|-------------------------------------------------------------------------|



2019–2022 108-2311-B-001-040-MY3, Ministry of Science and Technology, Taiwan

Grants for postdoc recruitment:

2021–2022 Postdoctoral Scholar Program, Academia Sinica, Taiwan: postdoc Tzu-Tong Kao

2020–2021 Research Grants for Recruiting Postdoctoral Researchers 109-2811-B-001-508- and 109-2811-B-001-598-, Ministry of Science and Technology, Taiwan: postdoc Tzu-Tong Kao

## Supervision, Teaching and Service

### Staff in lab

- 2020– Dr. Ming-Wei Lai (Lab manager)
- 2020– Dr. Tzu-Tong Kao (Postdoc)
- 2021– Serge Ryndov (RA)
- 2020– Siwat Chang (RA)
- 2019– Tzu-Haw Wang (RA)
- 2019– Chia-Ling Yang (RA)
- 2019 Bo-Wei Wang (Lab manager)

### Student supervision

- 2021 Yu-Hsin Huang (TIGP Biodiversity lab rotation)
- 2021 Iris Wu (undergraduate research intern)
- 2020–2021 Tsu-Wang Sun (master’s student, Genome and Systems Biology Degree Program)
- 2020–2021 Tong Jyun Tom Ho (undergraduate research intern)
- 2020 Shang-Hong Lin (IPMB summer undergraduate intern)
- 2020 Lê Thi Khanh Vi (TIGP spring international intern)
- 2019 Tsu-Wang Sun and Yi-Fang Chuang (IPMB summer undergraduate interns)
- 2019–2020 Tsu-Wang Sun (undergraduate student funded by Ministry of Science and Technology Research Grant 108-2813-C-001-033-B [01/07/2019–28/02/2020, NTD 48,000])

### Teaching experience

- 2020– Course instructor, “Diversity and Evolution of Eukaryotes”, fall semester course at Institute of Ecology and Evolutionary Biology and Genome and Systems Biology Degree Program, National Taiwan University, Taiwan (2020 Fall; 2021 Fall)
- 2020– Lecturer, “Eukaryotic microbes: from microalgae to giant viruses”, Department of Life Science course “Advanced Plant Biology”, National Central University, Taiwan (10/06/2020; 16/06/2021)
- 2020– Guest lecturer, “Diversity of eukaryotic cellular structures”, Department of Life Science course “Microbiology”, National Taiwan University, Taiwan (27/04/2020; 29/03/2021)
- 2020– Lecturer, “Omics”, TIGP course “Advanced Microbiology”, Academia Sinica, Taiwan (14/04/2020; 20/04/2021)
- 2020– Lecturer, “Eukaryotic microbes: evolution, diversity and ecology”, Biology Program for Selected Senior High School Students, Academia Sinica, Taiwan (in Mandarin) (11/04/2020; 06/02/2021)

- 24/03/2020 Lecturer, “Behind the Scenes of Scientific Publishing”, TIGP Biodiversity Seminar, Academia Sinica, Taiwan
- 2019– Student advisor, TIGP Molecular and Biological Agricultural Sciences Seminar, Academia Sinica, Taiwan
- 2014–2015 Teaching assistant, Perl for Biologists / Genomic Analyses, Institute of Molecular Evolution, Heinrich Heine University Düsseldorf, Germany
- 2009–2010 Teaching assistant, General Biology Laboratory, National Taiwan University, Taiwan

### **Graduate program affiliations**

- 2020– Institute of Ecology and Evolutionary Biology (PhD and Master’s), National Taiwan University and Academia Sinica, Taiwan
- 2020– Genome and Systems Biology Degree Program (PhD and Master’s), National Taiwan University and Academia Sinica, Taiwan
- 2020– Bioinformatics Program (PhD), Taiwan International Graduate Program (TIGP), Academia Sinica and National Taiwan University/National Tsing Hua University, Taiwan
- 2020– Marine Biotechnology PhD Degree Program, National Taiwan Ocean University and Academia Sinica, Taiwan
- 2020– Microbial Genomics PhD Degree Program, National Chung Hsing University and Academia Sinica, Taiwan
- 2019– Molecular and Biological Agricultural Sciences Program (PhD), Taiwan International Graduate Program, National Chung Hsing University and Academia Sinica, Taiwan
- 2019– Biodiversity Program (PhD), Taiwan International Graduate Program, National Taiwan Normal University and Academia Sinica, Taiwan
- 2019– Institute of Plant Biology PhD Program, National Taiwan University and Academia Sinica, Taiwan
- 2019– Department of Life Science PhD and Master’s Programs, National Central University and Academia Sinica, Taiwan
- 2019– Department of Microbiology Master’s Program, Soochow University and Academia Sinica, Taiwan

### **Organization of seminars/conferences**

- 03/2021 Academia Sinica Meeting on Large-Particle Flow Cytometry and Sorting, IPMB, Academia Sinica, Taipei, Taiwan (March 3, 2021)
- 03/2021 IPMB-ABRC Joint Webinar by Dr. Patrick Shih (Dept. of Plant Biology, University of California, Davis, USA), IPMB, Academia Sinica, Taipei, Taiwan
- 06/2020 IPMB Seminar by Dr. Oliver Mueller-Cajar (School of Biological Sciences, Nanyang Technological University, Singapore)

10/2019 Ministry of Science and Technology Outstanding Lectureship by Prof. James Van Etten (Dept. of Plant Pathology, University of Nebraska-Lincoln, USA), with seminars at Academia Sinica, National Taiwan University, National Cheng Kung University and National Chung Hsing University, Taiwan

### **Referee service for scientific journals**

<https://publons.com/researcher/1500155/chuan-ku/>

*BMC Evolutionary Biology, BMC Genomics, Evolution, Frontiers in Molecular Biosciences, Genes, Genome Biology and Evolution, Genomics, International Journal of Molecular Sciences, Journal of Molecular Evolution, Microbial Cell, Microbial Genomics, Molecular Biology and Evolution, Molecular Ecology, Molecular Ecology Resources, New Phytologist, Nucleic Acids Research, Plants, PLoS One, Proceedings of the Royal Society B, Scientific Reports, Sustainability, Virology Journal*

### **Referee service for grant funding agencies**

National Research, Development and Innovation Office, Hungary

Ministry of Science and Technology, Taiwan

### **PhD committees**

Yi-Chien Lee, Qualification Exam (thesis proposal), TIGP Biodiversity, Academia Sinica and National Taiwan Normal University (Advisor: Isheng Jason Tsai) [06/07/2021]

Shang-Che Kuo, Annual Report, Genome and Systems Biology Degree Program, Academia Sinica and National Taiwan University (Advisor: Ying-Chung Lin) [16/07/2021]

Tsung-Han Wu, Qualification Exam (thesis proposal), Genome and Systems Biology Degree Program, Academia Sinica and National Taiwan University (Advisor: Chun-Hua Hsu) [21/07/2021]

Tsung-Yu Huang, Qualification Exam (non-thesis proposal), TIGP Molecular and Cell Biology, Academia Sinica and National Taiwan Normal University (Advisor: Yen-Ping Hsueh) [12/08/2021]

### **Master's thesis committees**

I-Jung Lin, Institute of Marine Environment and Ecology, National Taiwan Ocean University (Advisor: Chih-Ching Chung) [16/07/2020]

Pin-Chien Liou, Institute of Plant Biology, National Taiwan University (Advisor: Ying-Chung Lin) [08/07/2021]

Chia-En Huang, Institute of Plant Biology, National Taiwan University (Advisor: Ying-Chung Lin) [08/07/2021]

### **Service at IPMB**

Member of Committee on IPMB Cell Biology Core (2019; 2021)

Member of Committee on IPMB Facebook Page (2019)

Member of Committee on IPMB Genomics Core (2020)

Contribution to improvement of pedestrian space next to IPMB Building (2020)

Member of Committee on IPMB Space & Environment (2021)

Member of Committee on IPMB PI Recruitment (2021)

### **Service at Academia Sinica**

Member of Administrative Committee on AS Family Housing for New Faculty (2020–2021)

Member of AS Dorm Committee (2021–2023)