Gen-Chang (Ken) Hsu

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CAREER SUMMARY

(Tailored to your target)

A passionate and motivated biology major with over six years of experience in ecological research. Having conducted an undergraduate research project funded by Ministry of Science and Technology and finished a 30-page-long English report. Involved a government-funded agro-ecology project led by Prof. Chuan-Kai Ho in Institute of Ecology and Evolutionary Biology and coauthored two technical reports. Completed an undergraduate thesis advised by Prof. Chuan-Kai Ho and published the work in an ecology journal. Actively participating in academic events and having presented in various local and international conferences. Skilled in performing outdoor field work as well as conducting indoor quantitative analysis.

EDUCATION

May 2020 | Aug. 2019 — ***Berkeley Bioscience Study Abroad (concentration in biology)***
Department of Integrative Biology, University of California, Berkeley — US
- GPA (GPA: 4.0/4.0)

Present | Sept. 2015 — ***Bachelors of Science in Life Science*** ***(expected)***
National Taiwan University, Department of Life Science — Taipei, Taiwan
- GPA: /4.3
- Dean Award (top 5% graduating students)
- Bachelor Degree Thesis (Advisor: Dr. Chuan-Kai Ho):
  Using Stable Isotopes ($\delta^{13}C$ and $\delta^{15}N$) to Quantify the Diet Compositions of Generalist Arthropod Predators in Organic and Conventional Rice Farms
  (Thesis successfully defended on April 26, 2021)

June 2015 | Sept. 2013 — Taipei Municipal Jianguo High School — Taipei, Taiwan

AREAS OF INTERESTS

- Trophic ecology, food web dynamics, stable isotope ecology

- Species interactions
- Community ecology and biodiversity
- Climate change ecology
- Agro-ecology
- Insect and spider ecology
- Biostatistics and ecological modeling
- Data science and visualization

PROFESSIONAL EXPERIENCE

June 2021 | Oct. 2020 — ***Undergraduate Research Assistant***
Plant-animal Interactions and Environmental Change Laboratory, Institute of Ecology and Evolutionary Biology, National Taiwan University
Advisor: Dr. Chuan-Kai Ho

- Project: The Strategic Development and Operation Model Trials for the Strengthening and Completion of Form and Function of Rural Ecosystem Service ─ Quantification of the Biological Control Efficacy of Arthropod Generalist Predators in Rice Agro-ecosystems using a Stable Isotope Approach (Year 4)
- Synthesized the results from three years of field data and drafted a manuscript

May 2020 | Jan. 2020 — ***Undergraduate Independent Research***
Community Ecology Laboratory, Department of Integrative Biology, University of California, Berkeley
Advisor: Dr. Wayne Sousa

- Project: Long-term infection dynamics of a snail-trematode host-parasite system in relation to bird populations
- Conducted data analysis and finished a short summary report

July 2019 | Mar. 2017 — ***Undergraduate Research Assistant***
Plant-animal Interactions and Environmental Change Laboratory, Institute of Ecology and Evolutionary Biology, National Taiwan University
Advisor: Dr. Chuan-Kai Ho

- Project: The Strategic Development and Operation Model Trials for the Strengthening and Completion of Form and Function of Rural Ecosystem Service ─ Quantification of the Biological Control Efficacy of Arthropod Generalist Predators in Rice Agro-ecosystems using a Stable Isotope Approach (Year 1 and 2)
- Conducted field surveys of arthropods in rice farms, laboratory work on stable isotope analysis, and data analysis. Co-authored two governmental reports

- Established a standard operation procedure for stable isotope analysis of arthropod communities in rice farms

Feb. 2018 | Sept. 2017 ***Undergraduate Researcher***
Ministry of Science and Technology Undergraduate Research Project
Advisor: Dr. Chuan-Kai Ho
- Project: Effects of warming, elevated CO_2 and drought on above- and below-ground biomass and competition of C_3 and C_4 species
- Received research grants from Ministry of Science and Technology (R.O.C) (Project number: 106-2813-C-002-163-B)
- Performed the experiments, analyzed the data, and completed a 30-page-long project report (in English)

Sept. 2017 | Sept. 2016 ***Part-time Assistant***
Plant-animal Interactions and Environmental Change Laboratory, Institute of Ecology and Evolutionary Biology, National Taiwan University
Lab PI: Dr. Chuan-Kai Ho
- Project: Experimental warming effects on crop production, pest population, and biocontrol effectiveness: an example from a soybean-aphid-ladybug system
- Assisted with data collection and thereby contributing to the publication of a journal article

Aug. 2015 ***Summer Research Volunteer***
Ecology and Social Biology Laboratory Field Internship, Biodiversity Research Center, Academia Sinica
Lab PI: Dr. Sheng-Feng Shen
- Project: Altitudinal patterns in cooperation behavior of burying beetle in relation to competition with blow flies
- Assisted with field equipment placement and data collection

FIELD EXPERIENCE

July 2017 Pasoh Forest Reserve Malaysia
- Actively participated in a two-week field course (Instructor: Dr. I-Fang Sun and Dr. Yu-Yun Chen)
- Conducted group projects and completed two final reports

PUBLICATIONS

Journal Articles

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2020). *Pest consumption by generalist arthropod predators increases with crop stage in both organic and conventional farms*. (In press)

Unpublished Work

- **Hsu, G.C.** and C.K. Ho. (2017). Effects of warming, elevated CO_2, and drought on above- and below-ground biomass and competition of a C_3 and a C_4 grass species. Taipei, Taiwan (R.O.C).

Chinese Publications

- 歐家昂、**許耿彰**、何傳愷（民107）。量化與促進農田生態系統服務。行政院農業委員會農業科技研究計畫期末成果報告，未出版。

- 歐家昂、**許耿彰**、何傳愷（民106）。量化與促進農田生態系統服務。行政院農業委員會農業科技研究計畫期末成果報告，未出版。

- 歐家昂、**許耿彰**、何傳愷（民106）。稻田生態系穩定同位素分析 (碳氮) 標準作業流程。行政院農業委員會農業科技研究計畫期末成果報告，未出版。

GRANTS AND SCHOLORSHIPS

2021	Department of Life Science scholarship for undergraduate publication (10000 NTD)
2019	College of Life Science scholarship for overseas education program (10000 NTD)
2019	Dalongdong Baoan Temple scholarship (5000 NTD)
2019	HSU Clan Association scholarship (3000 NTD)
2018	National Taiwan University Duanfang Hui Yan memorial scholarship (80000 NTD)
2018	Dalongdong Baoan Temple scholarship (5000 NTD)
2018	HSU Clan Association scholarship (3000 NTD)
2018	College of Life Science scholarship for attending international conference (7000 NTD)
2017	Ministry of Science and Technology undergraduate research project grant (48000 NTD)

AWARDS AND HONORS

2019	The Dean Award, College of Life Science, National Taiwan University
2019	Academic Excellence Award (top 5% students) in Spring semester
2019	Academic Excellence Award (top 5% students) in Fall semester

2017 Academic Excellence Award (top 5% students) in Spring semester
2017 Academic Excellence Award (top 5% students) in Fall semester
2016 Department of Foreign Languages and Literatures, National Taiwan University Freshman English Writing Contest Judges' Award
2014 25th International Biology Olympiad Gold Medal

TEACHING AND MENTORSHIP

Teaching, advising, leadership, coordinating experiences, instructor, mentor

ADMINISTRATION AND ORGANIZATION

Public Talks

- *A Paradigm Shift in Conservation of Public Lands for 21st Century* Berkeley, US
  Date: December 4, 2019
  Speaker: Dr. Sarah Allen (US National Park Service)

CONFERENCE PRESENTATIONS

Oral Presentations

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2019, Mar.). *Stable isotopes reveal trophic dynamics of generalist arthropod predators in organic and conventional rice farms.* The 66th Annual Meeting of the Ecological Society of Japan, Kobe, Japan.

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2019, Jan.). *Trophic Dynamics of Generalist Arthropod Predators in Organic and Conventional Rice Paddy Farms - A Stable Isotope Approach.* 30th Congress of Animal Behavior and Ecology, Taipei, Taiwan.

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2018, Oct.). *Trophic Dynamics of Arthropod Generalist Predators in Organic and Conventional Rice Paddy Farms - A Stable Isotope Approach.* International Long-Term Ecological Research Scientific Conference, Taichung, Taiwan.

Poster Presentations

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2018, Nov.). Trophic Dynamics of Generalist Arthropod Predators in Organic and Conventional Rice Farms across Landscapes. 6th Taiwan-Japan Ecological Workshop, Tainan, Taiwan.

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2018, Mar.). Trophic Dynamics of Generalist Arthropod Predators in Organic and Conventional Rice Farms across Landscapes. The 65th Annual Meeting of the Ecological Society of Japan, Sapporo, Japan.

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2018, Jan.). Effects of farming practice and landscap on arthropod food web structure and biocontrol in rice paddies. 29th Congress of Animal Behavior and Ecology, Hsinchu, Taiwan.

- **Hsu, G.C.**, J.A. Ou, and C.K. Ho. (2017, Oct.). Effects of farming practice and landscape on arthropod food web structure and biocontrol in rice paddies. 39th Annual Meeting of Taiwan Entomological Society, Taichung, Taiwan.

ACADEMIC ACTIVITIES ATTENDED

Conferences

- The 32th Congress of Animal Behavior and Ecology, Taiwan - Jan. 2021
- The 66th Annual Meeting of the Ecological Society of Japan, Kobe, Japan - Mar. 2019
- The 30th Congress of Animal Behavior and Ecology, Taiwan - Jan. 2019
- International Long-Term Ecological Research Scientific Conference, Taiwan - Oct. 2018
- The 29th Congress of Animal Behavior and Ecology, Taiwan - Jan. 2018
- The 28th Congress of Animal Behavior and Ecology, Taiwan - Jan. 2017
- The 27th Congress of Animal Behavior and Ecology, Taiwan - Jan. 2016

Courses and Workshops

- Structural Equation Modeling Workshop, Tunghai University, Taiwan - Apr. 27-28, 2019 (Instructor: Dr. Marko Spasojevic, University of California Riverside)
- Writing Workshop for Ecology and Evolution Research, Taiwan Entomology Society - Nov. 2018
- Summer Ecology Field Course, National Taiwan Normal University - Sept. 2018
- Taiwan Ecology Field Course, Nanyang Technological University, Singapore - June 2018
- Biodiversity Information Workshop, Taiwan Endemic Species Research Institute - Aug. 2017

Educational Programs

- Future Earth Ecology Program, National Tsinghua University - Aug. 2016 - Sept. 2017
- Talent Cultivation Project for Life Science, Academia Sinica - Aug. 2014 - Aug. 2015

PROFESSIONAL AND SOCIAL INVOLVEMENT

2017 **Volunteer Tutor for Vox Nativa Choir, Vox Nativa Association, Taiwan**
- Instructed choir members on schoolwork
- Assisted with choir members' daily routines and activities

2015 **Summer Docent at Museum of Zoology, National Taiwan University**
- Received and guided school groups and visitors
- Maintained museum's exhibition and ensured museum's smooth operation

ACADEMIC AND SOCIAL MEDIA

- Google Scholar Profile: To be created
- ORCiD: https://orcid.org/0000-0002-6607-4382
- GitHub: https://github.com/GenChangHSU
- ResearchGate: https://www.researchgate.net/profile/Gen Chang_Hsu
- Twitter: https://twitter.com/GenChangHSU
- Facebook: https://facebook.com/GenChangHSU
- Personal blog (ggGallery): https://genchanghsu.github.io/ggGallery/

PROFESSIONAL MEMBERSHIPS

- Student member, Society of Conservation Biology Berkeley Chapter (2019-2020)
- Student member, The Ecological Society of Japan (ESJ) (2019)
- Student member, The Ecological Society of Japan (ESJ) (2018)

PROFESSIONAL SKILLS

- **Programming:** R (statistical analysis and ggplot2 graphics)
- **Project management and collaboration:** Git and GitHub
- **Laboratory techniques:** stable isotope analysis
- **Basic website design skills**

LANGUAGES AND OTHER SKILLS

- Chinese (native)
- English (conversant)
- Driving license (Taiwan)

PROFESSIONAL REFERENCES

Dr. Chuan-Kai Ho
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