

Yangkang Chen (陈旻康)

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GitHub: <https://github.com/chenyangkang>

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EDUCATION

- PhD** 2024-2029 (expected) **Doctor of Philosophy in Ecology, Evolution & Conservation Biology, University of Illinois Urbana-Champaign, US**
Program in Ecology, Evolution & Conservation Biology
Advisor: Benjamin M. Van Doren
- MS** 2021-2024 **Master in Ecology, Institute of Zoology, Chinese Academy of Sciences, China**
Key Laboratory of Animal Ecology and Conservation Biology
Advisor: Xiangjiang Zhan
Thesis: "Using citizen science big data of bird observation to study biodiversity spatiotemporal pattern and mechanism"
- MS** 2021-2023 **Master of Applied Data Science, University of Michigan**
School of Information
Leading Project: "Predicting and Clustering Bird Migration Patterns Across America Continent"
Leading Project: "Price Recommender Web Application for New Properties on Airbnb"
- BS** 2017-2021 **Bachelor of Science, major in Ecology, Sichuan University, China**
School of Lifescience
Ranked 1st in the major. **Advisor: Kangshan Mao**
Thesis: "The Revelation of Genomic Breed Composition Using Target Sequence Capture and SNPs: a case of Taxodium"

AWARDS & SCHOLARSHIPS

- 2025** American Ornithological Society Student Research Grant (\$4000)
- 2025** American Ornithological Society Student Membership Award
- 2024** Illinois Distinguished Fellowship, University of Illinois Urbana-Champaign
- (total \$75,000 over 3 years)
- competitive
- 2024** Excellent Student of University of Chinese Academy of Sciences
- 2021** Excellent Graduate of Sichuan University (*summa cum laude*)
- 2020** Special Scholarship of College of Life Sciences, Sichuan University (¥5000)
- competitive; top 1 in College of Life Sciences
- 2020** Good Doctor Scholarship, College of Life Sciences, Sichuan University (¥2000)
- competitive; top 10% in College of Life Sciences.
- 2019** National Scholarship, Ministry of Education of the People's Republic of China (¥8000)
- competitive; top 1% in College of Life Sciences
- 2019** Excellent Student of Sichuan University
- 2018** Excellent Student of Sichuan University

MINOR GRANTS

2025 American Ornithology Society Conference Travel Grant (\$970)
2025 Wilson Ornithology Society Conference Travel Grant (\$500)

PUBLICATIONS

5. Zhang, W., Gu, Z., **Chen, Y.**, Zhang, R., & Zhan, X. (2025). Birds migrate longitudinally in response to the resultant Asian monsoons of the Qinghai-Tibet Plateau uplift. *eLife*, 14:RP103971. [\[Link\]](#)
4. Han, Z., **Chen, Y.**, Dai, X., Yu, C., Cheng, J., Li, J., & Mao, K. (2024). The revelation of genomic breed composition using target capture sequencing: a case of *Taxodium*. *Forestry Research*, 4, e034. [\[Link\]](#)
3. **Chen, Y.**, Gu, Z. & Zhan, X. (2024). stemflow: A Python Package for Adaptive Spatio-Temporal Exploratory Model. *Journal of Open Source Software*, 9(94), 6158. [\[Link\]](#)
2. Shao, Z., Hou, X., **Chen, Y.**, Lin, Z., & Zhan, X. (2023). RNA sampling time on postmortem avian carcasses in the wild. *Wildlife Biology*, e01157. [\[Link\]](#)
1. **Chen, Y.**, Wang, Y., Li, J., Wang, W., Feng, D., & Mao, K. (2021). Principles, error sources and application suggestions of prevailing molecular dating methods. *Biodiversity Science*, 29(5), 629. [\[Link\]](#)

PROJECTS & TOOLS

- 2024 - BirdFlow (contribute): Learning seasonal bird movements from eBird data.
GitHub repository: <https://github.com/birdflow-science>
- 2023 stemflow: A package for Adaptive Spatio-Temporal Exploratory Model (AdaSTEM) in python
GitHub repository: <https://github.com/chenyangkang/stemflow>
- 2022 MADS Milestone project: Predicting and Clustering Bird Migration Patterns Across America.
GitHub repository: https://github.com/chenyangkang/MADS_Milestone2_Bird_Migration
- 2023 MADS Capstone project: Price Recommender Web Application for New Properties on Airbnb.
GitHub repository: https://github.com/foye501/Capstone_GMT89
- 2023 Fasta2Codeml: A codeml pipeline wrapper for easier natural selection analysis.
GitHub repository: <https://github.com/chenyangkang/Fasta2Codeml>
- 2023 PooledPSMC: Auto-PSMC with individual pooling method.
GitHub repository: <https://github.com/chenyangkang/PooledPSMC>

CONFERENCE & WORKSHOP PRESENTATION

Talk

- 2025 Jun 24 Community dynamics of the North American bird migration system. **Wilson Ornithological Society 2025 Meeting**, Los Angeles, CA, USA (15min).
- 2025 Mar 29 Spatiotemporal patterns of species co-occurrence in migratory birds. **5th NRES annual research symposium**, UIUC, IL, USA (5 min lightning talk).
- 2024 Nov 27 stemflow: A Python Package for Adaptive Spatio-Temporal Exploratory Model (AdaSTEM). **Modelling workshop for the Life Euro Bird Portal (EBP) project** (45min, virtual).

Poster

- 2025 Feb 7 Spatiotemporal patterns of interspecific interaction in migratory birds. **27th GEEB annual graduate student symposium**, UIUC, IL, USA (**best poster award**).

PROFESSIONAL & ACADEMIC SERVICES

2024 Sep – PEEC seminar student committee, PEEC program, UIUC.
2023 Feb – 2024 Feb Journal club host for the group of population evolutionary genetics, IOZ, CAS.

FIELD WORK

2021 Feb Saker Falcon Breeding Ecology Survey - Qinghai, China
2020 Jul Summer Community Survey of Lepidoptera in Lixian County (**Team Leading**)
- Lixian, Sichuan, China
2020 May Bird Community Survey: 10 Counties in Western Sichuan Province - Sichuan, China
2019 Oct Insect Community Survey in Pingwu County - Pingwu, Sichuan, China
2019 Jun Rodent Community Survey in Chengdu - Chengdu, Sichuan, China
2019 Jun-Jul Field Research for Ecology Major (**Team Leading**) - Leshan, Sichuan, China

LANGUAGES

Python, R, Shell, Chinese (native), English (fluent), Japanese (daily conversation)