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RESEARCH PROFILE

Evolutionary genomicist studying avian radiation, speciation, comparative genomics, genome evolution, complex phenotypic evolution, transposable elements, and large-scale genome resources. Current work contributes to the Genus phase of the Bird 10,000 Genomes Project (B10K).

APPOINTMENTS

2024-present

Postdoctoral Researcher

Centre for Evolutionary & Organismal Biology, Zhejiang University, Hangzhou, China

EDUCATION

2018-2024

PhD in Genomic Sciences

University of Chinese Academy of Sciences; postgraduate joint training at BGI-Shenzhen

2014-2018

BSc in Biological Sciences

China University of Geosciences; undergraduate joint training at BGI-Shenzhen

RESEARCH AREAS

- Avian phylogenomics, rapid radiation, and speciation
- Comparative genomics and genome resource development
- Genome evolution and complex phenotypic evolution
- Transposable elements and endogenous retroviruses
- Recombination, phylogenetic conflict, and sex-chromosome evolution
- Bird 10,000 Genomes Project (B10K): Family and Genus phases

PEER-REVIEWED PUBLICATIONS

Role labels identify papers on which I am the first author or a co-first author. Publications are listed in reverse chronological order.

2026

1. Oksnebjerg DB, Nielsen SD, Chen G, et al.. (2026). A comprehensive reference genome assembly dataset of birds inhabiting Denmark, Greenland, and the Faroe Islands. *GigaScience* giag078. DOI: 10.1093/gigascience/giag078. [Co-first author]
2. Chen G, Wang S, Oksnebjerg DB, Nielsen SD, Dai W, et al.. (2026). Draft assemblies for 177 bird species enhance genus-level coverage. *GigaScience* 15: giag045. DOI: 10.1093/gigascience/giag045. [Co-first author]
3. Wanders K, Oguzhan Z, Stervander M, Kimball RT, Braun EL, Dreyer S, Oksnebjerg DB, Graves GR, Rahbek C, Chen G, Feng S, Zhang G, and Hosner PA. (2026). Founder effects drive high mitochondrial dN/dS in island rails. *Evolution* 80(6): 1343-1356. DOI: 10.1093/evolut/qpag068.

2025

4. Chen G, Xie Y, and Zhang G. (2025). Phylogenomics and comparative genomic perspective on the avian radiation. *Nature Reviews Biodiversity*. DOI: 10.1038/s44358-025-00062-9. [First author]
5. Stervander M, Chen G, Feng S, and Mayr G. (2025). Nesotrochidae, fam. nov. - a new name for the New World cave rails *Nesotrochis* spp., sister taxon of the New Zealand adzebills (Aptornithidae). *Avian Systematics* 2: 85-98.

2024

6. Chen G, Yu D, Yang Y, Li X, Wang X, Sun D, Lu Y, Ke R, Zhang G, Cui J, and Feng S. (2024). Adaptive expansion of ERVK solo-LTRs is associated with Passeriformes speciation events. *Nature Communications* 15: 3151. DOI: 10.1038/s41467-024-47501-3. [First author]
7. Wanders K, Chen G, Feng S, Szekely T, and Urrutia AO. (2024). Role-reversed polyandry is associated with faster fast-Z in shorebirds. *Proceedings of the Royal Society B* 291: 20240397. DOI: 10.1098/rspb.2024.0397. [Co-first author]
8. Stiller J, Feng S, Chowdhury A, Rivas-Gonzalez I, Duchene D, Fang Q, Deng Y, Kozlov O, Stamatakis A, Claramunt S, Nguyen J, Ho S, Faircloth B, Haag J, Houde P, Cracraft J, Balaban M, Mai U, Chen G, et al.. (2024). Complexity of avian evolution revealed by family-level genomes. *Nature*. DOI: 10.1038/s41586-024-07323-1.

9. Mirarab S, Rivas-Gonzalez I, Feng S, Stiller J, Fang Q, Mai U, Hickey G, Chen G, Brajuka N, Fedrigo O, Formenti G, Wolf JBW, Howe K, Antunes A, Schierup MH, Paten B, Jarvis ED, Zhang G, and Braun EL. (2024). A region of suppressed recombination misleads neoavian phylogenomics. *Proceedings of the National Academy of Sciences* 121(15). DOI: 10.1073/pnas.2319506121.

2023

10. Yang C, Zhou Y, Song Y, Wu D, Zeng Y, Nie L, Liu P, Zhang S, Chen G, et al.. (2023). The complete and fully-phased diploid genome of a male Han Chinese. *Cell Research*. DOI: 10.1038/s41422-023-00849-5.
11. Germain RR, Feng S, Chen G, Graves GR, Tobias JA, Rahbek C, Lei F, Fjeldsa J, Hosner PA, Gilbert MTP, Zhang G, and Nogues-Bravo D. (2023). Species-specific traits mediate avian demographic responses under past climate change. *Nature Ecology & Evolution*. DOI: 10.1038/s41559-023-02055-3.
12. Germain RR, Feng S, Buffan L, Carmona CP, Chen G, Graves GR, Tobias JA, Rahbek C, Lei F, Fjeldsa J, Hosner PA, Gilbert MTP, Zhang G, and Nogues-Bravo D. (2023). Changes in the functional diversity of modern bird species over the last million years. *Proceedings of the National Academy of Sciences* 120. DOI: 10.1073/pnas.2201945119.
13. Wanders K, Chen G, Feng S, Zhang G, Szekely T, Bruford M, Vegvari Z, Eichhorn G, and Urrutia A. (2023). Polygamy and purifying selection in birds. *Evolution*. DOI: 10.1093/evolut/qpac010.

2022

14. Li X, Gao R, Chen G, Price AL, Oksnebjerg DB, Hosner PA, Zhou Y, Zhang G, and Feng S. (2022). Draft genome assemblies of four manakins. *Scientific Data* 9: 564. DOI: 10.1038/s41597-022-01680-0.
15. Feng S, Bai M, Rivas-Gonzalez I, Li C, Liu S, Tong Y, Yang H, Chen G, et al.. (2022). Incomplete lineage sorting and phenotypic evolution in marsupials. *Cell*. DOI: 10.1016/j.cell.2022.03.034.

2021

16. Sinding M-HS, Ciucani MM, Ramos-Madriral J, Carmagnini A, Rasmussen JA, Feng S, Chen G, et al.. (2021). Kouprey (*Bos sauveli*) genomes unveil polytomic origin of wild Asian Bos. *iScience* 24: 103226. DOI: 10.1016/j.isci.2021.103226.
17. Thorup K, Pedersen L, da Fonseca RR, Naimi B, Nogues-Bravo D, Krapp M, Manica A, Willemoes M, Sjöberg S, Feng S, Chen G, et al.. (2021). Response of an Afro-Palearctic bird migrant to glaciation cycles. *Proceedings of the National Academy of Sciences* 118. DOI: 10.1073/pnas.2023836118.
18. Wang Z, Zhang J, Xu X, Witt C, Deng Y, Chen G, Meng G, Feng S, Xu L, Szekely T, Zhang G, and Zhou Q. (2021). Phylogeny and sex chromosome evolution of Palaeognathae. *Journal of Genetics and Genomics*. DOI: 10.1016/j.jgg.2021.06.013.
19. Xie D, Chen G, Meng X, Wang H, Bi X, Fang M, Yang C, Zhou Y, Long E, and Feng S. (2021). Comparable number of genes having experienced positive selection among great ape species. *Animals* 11: 3264. DOI: 10.3390/ani11113264.

2020

20. Wang Z-J, Chen G-J, Zhang G-J, and Zhou Q. (2020). Dynamic evolution of transposable elements, demographic history, and gene content of paleognathous birds. *Zoological Research* 41. DOI: 10.24272/j.issn.2095-8137.2020.175.
21. Feng S, Stiller J, Deng Y, Armstrong J, Fang Q, Reeve AH, Xie D, Chen G, et al.. (2020). Dense sampling of bird diversity increases power of comparative genomics. *Nature* 587: 252-257. DOI: 10.1038/s41586-020-2873-9.

2019

22. Feng S, Fang Q, Barnett R, Li C, Han S, Kuhlwillm M, Zhou L, Pan H, Deng Y, Chen G, et al.. (2019). The genomic footprints of the fall and recovery of the crested ibis. *Current Biology* 29: 340-349. DOI: 10.1016/j.cub.2018.12.008.

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