

Pengyao Jiang

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<https://pyjiang.github.io/>

Academic Employment

Incoming Assistant Professor at the Biodesign Center for Mechanisms of Evolution and School of Life Sciences at Arizona State University starting January 2024

12/2022 – 11/2023	Acting Instructor in Genome Sciences University of Washington, Seattle, WA
01/2018 – 11/2022	Postdoctoral Scholar in Genome Sciences University of Washington, Seattle, WA Mentor: Kelley Harris, co-mentor: Maitreya Dunham
07/2017 – 12/2017	Postdoctoral Scholar in Ecology and Evolution The University of Chicago, Chicago, IL Mentor: John Reinitz, co-mentor: Martin Kreitman

Education

09/2010 – 06/2017	Ph.D. in Ecology and Evolution The University of Chicago, Chicago, IL Mentor: John Reinitz, co-mentor: Martin Kreitman
09/2006 – 06/2010	B.E. in Computer Science and Technology East China Normal University, Shanghai, China
02/2009 – 07/2009	Exchange student, Shanghai Jiao Tong University

Selected Honors and Awards

2020	Parker Travel Award for best poster at UW Genome Sciences retreat
2015	Systems Biology short course at UC Irvine full scholarship
2012	MBL Gene regulatory network course scholarship award
2010	Outstanding Graduates in Shanghai
2009	1 st Prize in China Undergraduate Mathematical Contest in Modeling (CUMCM)
2007, 2008	National Scholarship (<i>highest scholarship in China; top 2% of all university students</i>)

Publications

Garge RK, Geck RC, Armstrong JO, Dunn B, Boutz DR, Battenhouse A, Leutert M, Dang V, **Jiang P**, Kwiatkowski D, Peiser T, McElroy H, Marcotte EM, Dunham MJ. Systematic Profiling of Ale Yeast Protein Dynamics across Fermentation and Repitching. *bioRxiv*, pp.2023-09 (2023).

<https://doi.org/10.1101/2023.09.21.558736>

Jiang P, Kreitman M, Reinitz J. The effect of mutational robustness on the evolvability of multicellular organisms and eukaryotic cells. *Journal of Evolutionary Biology* 36(6), 906–924 (2023).

<https://onlinelibrary.wiley.com/doi/10.1111/jeb.14180>

Yeh CL, **Jiang P**, Dunham MJ. High-throughput approaches to functional characterization of genetic variation in yeast, *Current Opinion in Genetics & Development* 76 (2022): 101979.
<https://www.sciencedirect.com/science/article/pii/S0959437X22000880>

Jiang P, Ollodart AR, Dunham, MJ. A Modified Fluctuation Assay with a *CAN1* Reporter in Yeast. *Bio-protocol* 12, no. 11 (2022): e4435-e4435. <https://bio-protocol.org/e4435>

Jiang P, Ollodart AR, Sudhesh, V, Herr AJ, Dunham MJ and Harris K. A modified fluctuation assay reveals a natural mutator phenotype that drives mutation spectrum variation within *Saccharomyces cerevisiae*. *eLife* (2021);10:e68285, <https://elifesciences.org/articles/68285>

Jiang P, Ludwig MZ, Kreitman M, Reinitz J. Natural variation of the expression pattern of the segmentation gene *even-skipped* in melanogaster. *Developmental biology* (2015), 405(1), 173-181.
<https://www.ncbi.nlm.nih.gov/pubmed/26129990>

He BZ, Ludwig MZ, Dickerson DA, Barse L, Arun B, Vilhjálmsson BJ, **Jiang P**, Park SY, Tamarina NA, Selleck SB, Wittkopp PJ, Bell GI, Kreitman M. Effect of genetic variation in a Drosophila model of diabetes-associated misfolded human proinsulin. *Genetics* 196, no. 2 (2014): 557-567.
<https://www.ncbi.nlm.nih.gov/pubmed/24281155>

Xu S, Jiao S, **Jiang P**, Ao P. Two-time-scale population evolution on a singular landscape. *Physical Review E*, (2014), 89(1), 012724. <https://www.ncbi.nlm.nih.gov/pubmed/24580274>

Jiao S, Xu S, **Jiang P**, Yuan B, Ao P, Wright–Fisher dynamics on adaptive landscape, *IET Systems Biology*, 7(5), 153-164. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8687433/>

Manuscripts in Preparation

Kim AR, **Jiang P**, Kang CK, Kreitman M, Ludwig MZ, Sharp DH, Reinitz J, Functional analysis of the *even-skipped* S2E enhancer in Drosophilidae and Sepsidae.

Jiang P, Bansal I, Harris K, Mutation spectra variation in the *Saccharomyces* genus.

Teaching

Apr. 2022	Instructor and facilitator for Girls Who Code (teaching coding for local high-school girls)
Jan. 2012 – Mar. 2012	Teaching Assistant: Molecular Evolution I: Fundamentals and Principles

Reviewer

PLOS Biology, PLOS Genetics, PLOS ONE, Genome Biology and Evolution, Scientific Reports, Bioinformatics, Evolutionary Bioinformatics, Frontiers in Bioscience

Short Courses and Workshops

2023	Master Class for Teaching Online (ASU, Online)
2021	Teaching workshop at Genome Sciences
2021	Summer Institute in Statistical Genetics on Quantitative Genetics at UW

2020	Future Faculty Fellows workshop
2015	Systems Biology short course at UC Irvine
2012	MBL Gene Regulatory Network Course
2011	10-week Teaching Assistant Training Class at the University of Chicago

Presentations

2023	SMBE Satellite Meeting on Mechanisms of Cellular Evolution, Oral The effect of mutational robustness on the evolvability of multicellular organisms and eukaryotic cells
2023	Pacific Northwest Yeast Club, Oral Mutation rate and spectrum variation and evolution in <i>Saccharomyces</i>
2022	University of Iceland (invited talk for Biology Seminar), Oral Uncovering natural histories of mutator alleles in budding yeast
2022	Yeast Genetics Meeting, Oral Uncovering natural histories of mutator alleles in budding yeast
2022	Population, Evolutionary, and Quantitative Genetics Conference (PEQG), Poster Uncovering natural histories of mutator alleles in budding yeast
2021	Society for Molecular Biology & Evolution (SMBE), Virtual Poster Mutation rate and spectrum variation in <i>S. cerevisiae</i> natural isolates
2021	The Biology of Genomes, Virtual Poster Mutation rate and spectrum variation in <i>S. cerevisiae</i> natural isolates
2020	The Allied Genetics Conference (TAGC), Virtual Poster Mutation rate and spectrum variation in <i>S. cerevisiae</i> natural isolates
2019	Gordon conference on Molecular Mechanisms in Evolution, Poster Mutation rate and spectrum variation in <i>S. cerevisiae</i> natural isolates
2016	SIAM Life Sciences, Oral The relationship between mutational robustness and adaptation
2016	The Allied Genetics Conference (TAGC), Poster The relationship between mutational robustness and adaptation
2015	Annual Drosophila Research Conference, Poster Testing the role of <i>Caudal</i> in activating <i>eve</i> stripe 2 expression in sepsid fly <i>T. putris</i>
2014	Midwest Drosophila Conference, Oral Natural variation in <i>eve</i> expression in <i>D. melanogaster</i>
2014	Annual Drosophila Research Conference, Poster Natural variation in <i>eve</i> expression in <i>D. melanogaster</i>

Outreach and Service

2022	Symposium of Molecular Evolution: In Honor of Marty Kreitman's Scientific Career organizing committee member
2022	PEQG Conference poster judge on Evolutionary Genetics
2021	Moderator of Undergraduate Research Symposium at University of Washington
2021	SMBE Conference online hub organizing committee member
2021	Genome Sciences Alumni Symposium planning committee member
2021	Skype a scientist, with 5th grade Medina Elementary School students
2018	Fulbright interviewer at University of Washington
2018	Science judge for Northwest Association for Biomedical Research (NWABR) "Biomedical Breakthroughs and My Life" Middle School Contest