

Chaohui Li

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Other links: [Google Scholar](#), [GitHub](#)

Research Interests

Algorithms, bioinformatics, Computational biology, cancer genomics, and machine learning.

Education

2023 – Present PhD student, Computer Science and Engineering, UC San Diego
Advisor: Prof. Vineet Bafna
2017 – 2021 B.Sci., Computer Science, City University of Hong Kong
GPA: 3.87/4.3 (Top 10% & First Class Honours)

Publications

(*joint first authorship)

- [1] **C. Li***, L. Chen*, G. Pan, W. Zhang, & S. C. Li. “Deciphering complex breakage-fusion-bridge genome rearrangements with Ambigram”. *Nature Communications*, 14, 5528, Sep 2023. DOI: <https://doi.org/10.1038/s41467-023-41259-w>
- [2] W. Zhang, J. Ju, Y. Zhou, T. Xiong, M. Wang, **C. Li**, S. Lu, Z. Lu, L. Lin, X. Liu, S. C. Li. “IM-perm: a fast and comprehensive IMMune Paired-End Reads Merger for sequencing data”. *Briefings in Bioinformatics*, vol. 24, issue 2, Mar 2023. DOI: <https://doi.org/10.1093/bib/bbad080>
- [3] L. Chen*, Y. Qing*, R. Li*, **C. Li***, H. Li, X. Feng, & S. C. Li. “Somatic variant analysis suite: copy number variation clonal visualization online platform for large-scale single-cell genomics”. *Briefings in Bioinformatics*, vol. 23, issue 1, Jan 2022. DOI: <https://doi.org/10.1093/bib/bbab452>
- [4] X. Feng, L. Chen, Y. Qing, R. Li, **C. Li**, & S. C. Li. “SCYN: single cell CNV profiling method using dynamic programming”. *BMC Genomics*, vol. 22, Nov 2021. DOI: <https://doi.org/10.1186/s12864-021-07941-3>

Research Experience

2023 – Present Graduate Student Researcher, Dept. of CSE, UC San Diego
Research topic: Algorithms in cancer genomics
Advisor: Prof. Vineet Bafna
2021 – 2023 Research Assistant, Dept. of Computer Science, CityU of Hong Kong
Research topic: Algorithms in deciphering complex structural variants
Advisor: Prof. Shuai Cheng Li
2019 – 2020 Student Research Assistant, CityU Shenzhen Research Institute
Research topic: Data visualization for single-cell genomic analysis

Teaching Assistant

2019 – 2021 CS2310, Computer Programming City University of Hong Kong

Honors & Awards

December 2020 Silver Award, the 12th “Challenge Cup” National Business Plan Competition for College Students

March 2020 CityU Scholarship, City University of Hong Kong

2018 – 2021 Dean’s List, College of Engineering, CityU of Hong Kong

2017 – 2021 CityU Mainland Student Scholarship (Full Tuition), CityU of Hong Kong

Software

- [scSVAS](#) – An online visualization platform for interactive single-cell genomics data analysis.
- [Puzzlengine](#) – A game generator for creating various sliding puzzles with optimal solutions.