

# Chen-Rui Xia

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## EDUCATION

### Peking University

PhD candidate in Center for Bioinformatics;

Advisor: Dr. Ge Gao

Beijing, China

Sep 2021 – Present

### Harbin Institute of Technology

Bachelor of Bioinformatics;

Harbin, China

Sep 2017 – June 2021

## PUBLICATION

Google Scholar: <https://scholar.google.com/citations?user=2scMf9oAAAAJ&hl=en>

- **DECIPHER**: **Chen-Rui Xia\***, Zhi-Jie Cao<sup>\*†</sup>, Ge Gao<sup>†</sup>. High-fidelity disentangled cellular embeddings for large-scale heterogeneous spatial omics via DECIPHER, *bioRxiv*, 2025. (Under review) ([Github](#))
- **SLE immune atlas**: **Chen-Rui Xia\***, Jun-Yan Qian\*, Yang Ding\*, Jiu-Liang Zhao, Qian Wang, Xin-Ping Tian, Xiao-Feng Zeng, Ge Gao<sup>†</sup>, Meng-Tao Li<sup>†</sup>. Global immune repertoire profiling suggests multifaceted unresolved dysregulation upon systemic lupus erythematosus immunosuppressant therapy, 2025. (Under review) ([Github](#))
- **PASSAGE**: Chen-Kai Guo\*, **Chen-Rui Xia\***, Guang-Dun Peng, Zhi-Jie Cao<sup>†</sup>, Ge Gao<sup>†</sup>. Learning phenotype associated signature in spatial transcriptomics with PASSAGE, *Small Methods*, 2025. ([Github](#))
- **SLAT**: **Chen-Rui Xia\***, Zhi-Jie Cao\*, Xin-Ming Tu, Ge Gao<sup>†</sup>. Spatial-linked alignment tool (SLAT) for aligning heterogeneous slices, *Nature Communication*, 2023 (*Editors' Highlight*). ([Github](#))
- **CLUE**: Xin-Ming Tu\*, Zhi-Jie Cao\*, **Chen-Rui Xia**, Sara Mostafavi<sup>†</sup>, Ge Gao<sup>†</sup>. Cross-Linked Unified Embedding for cross-modality representation learning, *NeurIPS*, 2022 (*Oral Presentation, top 5%*). ([Github](#))

## AWARDS

- |   |      |
|---|------|
| • China National Natural Science Foundation for Ph.D. students ( <i>first batch</i> ) | 2024 |
| • Peking University President Scholarship   | 2024 |
| • Novogene Scholarship  | 2024 |
| • Graduate Research Star of School of Life Science                                    | 2023 |
| • Outstanding Graduates of Harbin Institute of Technology                             | 2021 |

## ACADEMIC SERVICE

- Reviewer of *Nature communication* and *Genome Biology*.

## SKILLS

**Coding**: Python, Slurm, PyTorch

**Other**: Badminton