
Yuhan Hao

New York University, New York Genome Center, New York, USA

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EDUCATION

New York University, New York, USA

Ph.D. in Biology; GPA: 3.95/4.0, mentored by Dr. Rahul Satija

Spring 2023

Honors: Fleur Strand Graduate Fellowship from New York University (2022)
New York Genome Center Outstanding Contribution (2021)
JTech Scholarship from The James P. Taylor Foundation (2020)
The Eugene Bell Award from New York University (2020)
The Chair's Award from New York University (2019)

Fordham University, New York, USA

M.S. in Data Science; GPA: 4.0/4.0

Aug. 2017

Honors: Professional Development Grant of Fordham University

Fordham University, New York, USA

M.S. in Biological Sciences; GPA: 3.72/4.0

May 2016

Honors: Professional Development Grant of Fordham University

Dalian University of Technology, Dalian, China

B.S. in Biotechnology; GPA: 87.9/100; Class Ranking: Top 3/60

June 2014

Honors: Academic Scholarship (Equivalent to the Dean's List), 2010-13
National Scholarship (Highest Scholarship for Undergraduate), 2010

Study Abroad: Royal Institute of Technology, Sweden

Fall 2011

SELECTED PUBLICATIONS

Full profile: <https://scholar.google.com/citations?user=UeuueiYAAAAJ&hl=en&oi=ao>

1. [Hao Y](#), Stuart T, Kowalski M, Choudhary S, Hoffman P, Hartman A, ... & Satija R. Dictionary learning for integrative, multimodal, and scalable single-cell analysis. *Nature Biotechnology* (In press). 2023.
2. [Hao Y](#), Hao S*, Andersen-Nissen E, Mauck WM, Zheng S, Butler A, ... & Smibert P, Satija R. Integrated analysis of multimodal single-cell data. *Cell*. 2021 May.
3. [Hao Y](#), Yang L, Neto A G, Amin M, Kelly D, Brown S, Branski R, Pei Z. HPVviewer: Sensitive and specific genotyping of human papillomavirus in metagenomic DNA, *Bioinformatics*. 2018 Jun.
4. Wessels H-H, Méndez-Mancilla A, [Hao Y](#), ... & Sanjana N, Satija R. Efficient combinatorial targeting of RNA transcripts in single cells with Cas13 RNA Perturb-seq. *Nature Method*. 2022 Dec.
5. Kedmi R, Najar TA, Mesa KR, Grayson A, Kroehling L, [Hao Y](#), ... & Littman D. A ROR γ t+ cell instructs gut microbiota-specific Treg cell differentiation. *Nature*. 2022 Sep.
6. Wu L, Hollinshead KE, [Hao Y](#), Au C, Kroehling L, Ng C, ... & Littman D. Niche-selective inhibition of pathogenic Th17 cells by targeting metabolic redundancy. *Cell*. 2020 Aug.
7. Stuart T*, Butler A*, Hoffman P, Hafemeister C, Papalexi E, Mauck III WM, [Hao Y](#), Stoeckius M, Smibert P, Satija R. Comprehensive integration of single-cell data. *Cell*. 2019 Jun.

SELECTED CONFERENCE PRESENTATIONS AND INVITED TALKS

1. Dictionary Learning for Integrative, Multimodal, and Scalable Single-cell Analysis. **Centers of Excellence in Genomic Science (CEGS)** annual meeting, USA, Oct. 2022
2. Integrated analysis of single-cell data across modalities and technologies. **Genentech Monthly Single-Cell seminar**, USA, May 2022
3. Dictionary Learning for Integrative, Multimodal, and Scalable Single-cell Analysis. **NYGC's Scientific Advisory Board (SAB) meeting**, USA, Apr. 2022
4. Multi-modal cell profiling and data integration to atlas the immune system. **CZI Single-Cell Biology monthly webinar**, USA, Apr. 2022
5. Integrated analysis and reference mapping of single-cell multimodal data. **MRC Weatherall Institute of Molecular Medicine Seminar, University of Oxford**, UK, Jan. 2022
6. Multimodal representation and mapping of single cell data. **Biological Data Science | Cold Spring Harbor Laboratory**, USA, Aug. 2020
7. Joint representation of single cell multi-omics data. **The Biology of Genomes | Cold Spring Harbor Laboratory**, USA, May 2020

WORK EXPERIENCE

1. *Teaching Assistant* of Statistics and machine learning for genomics in NYU Fall 2020, Fall 2022
2. *Bioinformatics programmer* in Applied Bioinformatics Laboratories NYU Langone Health
 - Analyzed metagenomic, ATAC-seq, RNA-seq, whole genome seq data June 2017 – May 2018
3. *Bioinformatics Research Assistant* in NYU Langone Health June 2016 – May 2017
4. *Teaching Assistant* of Discrete Mathematics in Fordham University Fall 2016, Spring 2017
5. *Teaching Fellow* of Intro Biology Lab in Fordham University Sept. 2014 – May 2016

COMPUTATIONAL SKILLS

PROGRAMMING LANGUAGES: R, Python, Bash, PyTorch, TensorFlow, Keras, Matlab, Spark, SQL

SOFTWARE DEVELOPMENTS:

1. Seurat v4 / Seurat v5 (<https://github.com/satijalab/seurat>) lead developer
2. Azimuth (<https://github.com/satijalab/azimuth>) lead developer
3. HPViewer (<https://github.com/yuhanH/HPViewer>) lead developer
4. MGS-Fast (<https://github.com/BCIL/MGS-Fast>) developer
5. uwot (<https://github.com/jlmeville/uwot>) contributor