Yutong Wang

University of California, Berkeley
Graduate Group in Biostatistics
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Education

University of California, Berkeley
Ph.D. in Biostatistics, 2018 - present
Advisor: Yun S. Song
Designated emphasis (doctoral minor) in Computational and Genomic Biology

Tianjin University, China
B.S. in Mathematics and Applied Mathematics, 2018

Research Interests

statistical machine learning, high dimensional statistics, probabilistic modeling, high-throughput sequencing, spatial transcriptomics, cancer biology

Publications

Youjin Lee[*†], Derek Bogdanoff[*], **Yutong Wang**[*], George Hartoularos, Jonathan M. Woo, Cody T. Mowery, Hunter M. Nisonoff, David S. Lee, Yang Sun, James Lee, Sadaf Mehdizadeh, Joshua Cantlon, Eric Shifrut, David N. Ngyuen, Theodore L. Roth, Yun S. Song, Alexander Marson[†], Eric D. Chow[†], Chun Jimmie Ye[†], XYZeq: Spatially-resolved single-cell RNA-sequencing reveals expression heterogeneity in the tumor microenvironment. *Science Advances* **7**, eabg4755 (2021).

[*] indicates equal contribution, [†] indicates co-corresponding authors

Professional Experience

University of California, Berkeley 2019 - present
Graduate Student Researcher Advisor: Yun S. Song
Develop and implement novel statistical methods and computational algorithms for the joint analysis of single-cell genomics data and other data modalities including spatial transcriptome and imaging data.

University of Pennsylvania 2017
Undergraduate Research Assistant Advisor: Nancy Zhang
Designed and implemented computational experiments to compare gene expression recovery methods for single cell RNA sequencing data.

Awards and Fellowships

STEM*FYI & PPG Foundation Professional Development Grant
Graduate Division, UC Berkeley 2022

Biostatistics Diversity Fellowship
Graduate Group in Biostatistics, UC Berkeley 2020 - 2022

Biostatistics Block Grant and Non-Resident Student Tuition Award
Graduate Group in Biostatistics, UC Berkeley 2018 - 2021

Berkeley Wellness Letter Fellowship
School of Public Health, UC Berkeley 2020 - 2021

Public Health Alumni Association Award
School of Public Health, UC Berkeley 2019

Talks

Joint integration analysis of paired single-cell imaging and RNA sequencing of mature adipocytes
Stanford-Berkeley Women in CS/EE Research Meetup, Stanford 2022
Women in Data Science, UC Berkeley 2022

Single-cell and spatial transcriptomics data analysis with Seurat in R
Computational Biology Skills Seminar, Center for Computational Biology, UC Berkeley 2021

XYZeq: Spatially-resolved single-cell RNA-sequencing reveals expression heterogeneity in tumor microenvironment
Computational and Genomic Biology Retreat, Center for Computational Biology, UC Berkeley 2021

Teaching

Center for Computational Biology, University of California, Berkeley
Instructor, Python Bootcamp Spring 2022
8-hour lectures to 122 participants including graduate students, postdoc and faculties about data structures, text manipulation, and file input/output.

Graduate Student Instructor, Algorithms for Single-Cell Genomics Fall 2021
Doctoral level course on algorithms and statistical methods in single-cell genomics. Three main themes of the course are spatial transcriptomics, multi-omics integration, and immune receptor-antigen interactions.

School of Public Health, University of California, Berkeley
Invited Lecturer, Biostatistics M.A. Seminar (PBHLTH 292) Spring 2022
Curriculum development and 6-hour lectures to graduate students on Eugenics in Statistics, Ethnics and Algorithmic Fairness in Health Care

Department of Statistics, University of California, Berkeley
Graduate Student Instructor, Concepts of Statistics (STAT 135) Spring 2020
Core upper-division course on statistical theory including parametric estimation, hypothesis testing, statistical tests, and linear regression.

Graduate Student Instructor, Introduction to Statistics (STAT 2) 2018 - 2019
Responsible for two sections with 50 students, office hours, and grading.

Outreach

University of California, Berkeley 2020 - present
Diversity, Equity, Inclusion & Belonging (DEIB) Fellow to plan, implement and organize concrete actions to increase diversity in Biostatistics.

Skills and Languages

R, Python, Matlab, Git, Bash, LaTeX, Mathematica
Mandarin (native), English (proficient), German (intermediate)