Yi Yang

Department of Biostatistics
City University of Hong Kong
83 Tat Chee Ave, Kowloon Tong, Hong Kong

Phone: +852-3442-4181
Email: yi.yang@cityu.edu.hk
Homepage: yiyangphd.github.io

EDUCATION

PhD in Biostatistics, University of Minnesota   2020
MS in Biostatistics, University of Minnesota   2017
BEng in Management Information Systems, Chu Kochen Honors College, Zhejiang University   2011

EMPLOYMENT

Assistant Professor   Jul 2022 – Present
Department of Biostatistics, City University of Hong Kong

Postdoctoral Research Scientist   Jul 2020 – Jun 2022
Department of Biostatistics, Columbia University
Advisor: Professor Iuliana Ionita-Laza

PUBLICATIONS

* Corresponding author

1. Fu, Y., **Yang, Y**.* (2025+). Knockoff-augmented neural networks for identifying risk variants in family-based association studies.

2. Wang, Q., Li, L., & **Yang, Y**.* (2025+). Knockoff-ML: A knockoff machine learning framework for controlled variable selection and risk stratification in electronic health record data.

3. **Yang, Y.***, Wang, Q., Wang, C., Buxbaum, J., & Ionita-Laza, I. (2024). KnockoffHybrid: A knockoff framework for hybrid analysis of trio and population designs in genome-wide association studies. *The American Journal of Human Genetics*, 111(7), 1448-1461.

4. **Yang, Y.**, Wang, C., Liu, L., Buxbaum, J., He, Z., & Ionita-Laza, I. (2022). KnockoffTrio: A knockoff framework for the identification of putative causal variants in genome-wide association studies with trio design. *The American Journal of Human Genetics*, 109(10), 1761-1776.

5. **Yang, Y.***, Basu, S., & Zhang, L. (2022). A Bayesian hierarchically structured prior for gene-based association test with multiple traits in genome-wide association studies. *Genetic Epidemiology*, 46 (1), 63-72.

6. **Yang, Y.***, Basu, S., & Zhang, L. (2021). A Bayesian hierarchically structured prior for rare-variant association testing. *Genetic Epidemiology*, 45(4), 413-424.

7. **Yang, Y.**, Basu, S., & Zhang, L. (2020). A Bayesian hierarchical variable selection prior for pathway-based GWAS using summary statistics. *Statistics in Medicine*, 39, 724-739.

8. **Yang, Y.**, Basu, S., Mirabello, L., Spector, L., & Zhang, L. (2018). A Bayesian gene-based genome-wide association study analysis of osteosarcoma trio data using a hierarchically structured prior. *Cancer Informatics*, 17, 1176935118775103.

9. Harindhanavudhi, T., **Yang, Y.**, Hodges, J., Pruett, T., Kirchner, V., Beilman, G., & Bellin, M. (2021). Body composition is associated with islet function after pancreatectomy and islet autotransplantation for pancreatitis. *Journal of Clinical Endocrinology & Metabolism*, 106(2), e496–e506.

10. Nathan, J., **Yang, Y.**, Witkowski, P., …, Hodges, J., & Bellin, M. (2021). Surgical approach and short-term outcomes in adults and children undergoing total pancreatectomy with islet autotransplantation: A report from the Prospective Observational Study of TPIAT. *Pancreatology*, 22(1), 1-8.

11. McEachron, K. R., **Yang, Y.**, Hodges, J. S., Beilman, G., Kirchner, V. A., Pruett, T. L., Chinnakotla, S., Hering, B. J., & Bellin, M. D. (2021). Performance of modified IGLS criteria to evaluate islet autograft function after total pancreatectomy with islet autotransplantation. *Transplant International*, 34(1), 87-96.

12. McEachron, K., **Yang, Y.**, Hodges, J., Beilman, G., Pruett, T., Kirchner, V., Freeman, M., Trikudanathan, G., Mulier, K., Ptacek, P., & Bellin, M. (2020). Alterations in enteroendocrine hormones after total pancreatectomy with islet autotransplantation. *Pancreas*, 49(6), 806-811.

13. Gutama, B., **Yang, Y.**, Beilman, G., Freeman, M., Kirchner, V., Pruett, T., Chinnakotla, S., Downs, E., Trikudanathan, G.,Schwarzenberg, S., Hodges, J., Bellin, M. (2019). Risk factors associated with progression towards endocrine insufficiency in chronic pancreatitis. *Pancreas,* 48(9), 1160-1166.

14. Trikudanathan, G., Elmunzer, B. J., **Yang, Y.**, Abu-El-Haija, M., Adams, D., Ahmad, S., ... & Freeman, M. L. (2021). Preoperative ERCP has no impact on islet yield following total pancreatectomy and islet autotransplantation (TPIAT): Results from the Prospective Observational Study of TPIAT (POST) cohort. *Pancreatology*, 21(1), 275-281.

15. McEachron, K., Skube, M., **Yang, Y.**, Hodges, J., Wilhelm, J., Beilman, G., Chinnakotla, S., Schwarzenberg, S., & Bellin, M. (2019). Utility of arginine stimulation testing in preoperative assessment of children undergoing total pancreatectomy with islet autotransplantation. *Clinical Transplantation*, e13647.

16. Brennan, M., Treister, N., Sollecito, T., Schmidt, B., Patton, L., **Yang, Y.**, Lin, A., Elting, L., Hodges, J., & Lalla, R. (2021). Epidemiologic factors in patients with advanced head and neck cancer treated with radiation therapy. *Head & Neck*, 43(1), 164-172.

17. Chinnakotla, S., Verghese, P., Chavers, B., Rheault, M. N., Kirchner, V., Dunn, T., Kashtan, C., Nevins, T., Mauer, M, Pruett, T., Kim, Y., Najera, L., Hanna, C., Kizilbash, S., Cook, M., Cisek, L., Gillingham, K., **Yang, Y.**, Matas, A., & Najarian, J. (2017). Outcomes and risk factors for graft loss: lessons learned from 1,056 pediatric kidney transplants at the University of Minnesota. *Journal of the American College of Surgeons*, 224(4), 473-486.

18. Wang, Q., **Yang, Y.**, Wang, Q., & Ma, Q. (2014). The effect of human image in B2C website design: an eye-tracking study. *Enterprise Information Systems*, 8(5), 582-605.

GRANTS

1. Award: Statistical methods for variable selection with false discovery rate control and applications to human genetic data
Award Type: Early Career Scheme
Role: Principal Investigator
Sponsoring Organization: Research Grants Council of Hong Kong
Award Number: 21303323
Award Dates: January 1, 2024 – December 31, 2026

2. Award: Prediction of patient mortality in intensive care units using machine learning with controlled variable selection
Award Type: Strategic Interdisciplinary Research Grant
Role: Co-Principal Investigator
Sponsoring Organization: City University of Hong Kong
Award Number: 7020097
Award Dates: April 1, 2023 – March 31, 2026

3. Award: Statistical methods for variable selection with false discovery rate control and applications to human genetic data
Award Type: Startup
Role: Principal Investigator

Sponsoring Organization: City University of Hong Kong
Award Number: 7200744
Award Dates: October 1, 2022 – September 30, 2025

PRESENTATIONS

Invited:

1. Workshop on Statistics and Data Science, Hong Kong University of Science and Technology, Hong Kong. August 2025.
2. Clinical Research Institute, Shanghai Jiao Tong University School of Medicine, Shanghai. June 2025.
3. National Taiwan University College of Public Health, Taipei. March 2025.
4. Tuen Mun Hospital Clinical Research Governance Committee, Hong Kong. August 2024.
5. International Conference on Frontiers of Data Science, Hangzhou. July 2024.
6. International Chinese Statistical Association China Conference, Wuhan. June 2024.
7. International Conference on Bioinformatics and Computational Biology, Tokyo. March 2024.
8. International Chinese Statistical Association International Conference, Hong Kong. July 2023.
9. International Chinese Statistical Association China Conference, Chengdu. June 2023.
10. Shanghai Jiao Tong University School of Medicine, Shanghai. May 2023.
11. Columbia University Center for Precision Medicine and Genomics and Institute for Genomic Medicine, New York. June 2022.
12. City University of Hong Kong School of Data Science, Hong Kong. Mar 2022.
13. Beijing Normal University Young Scholars Forum, Beijing. Dec 2021.

Contributed:

14. Biostatistics Workshop: Statistical Lessons of Hong Kong Nasopharyngeal Carcinoma Trials and Related Topics, Hong Kong. June 2025.
15. The 2024 Joint Statistical Meetings, Portland, OR. August 2024.
16. Columbia University Irving Medical Center Statistical Genetics Journal Club, New York, NY. May 2021.
17. The 2019 Joint Statistical Meetings, Denver, CO. July 2019.
18. The 2019 American Statistical Association Twin Cities Chapter Spring Event, Minneapolis, MN. April 2019.
19. The 2018 Joint Statistical Meetings, Vancouver, BC. July 2018.

TEACHING

1. BIOS 5802: Advanced Methods in Biostatistics (Spring 2023 - 2025)
2. SDSC 3105: Bayesian Analysis (Fall 2023, 2024)
3. BIOS 8001: Seminars on Biostatistics (Fall 2023, 2024)
4. BIOS 6903: Communication and Project Study (Summer 2023)
5. SDSC 6006: Dissertation (Fall 2022, Spring 2023)
6. SDSC 6002: Research Projects for Data Science (Spring 2023)

HONORS AND AWARDS

Jacob E. Bearman Student Achievement Award, University of Minnesota	2020
People's Choice Best Student Poster Award, University of Minnesota	2019
Student Senate Professional Development Award, University of Minnesota	2019

Dean's PhD Scholars Award, University of Minnesota	2017
Outstanding Research Assistant Award, University of Minnesota	2017
Biostatistics Summer Institute Scholarship, University of Washington	2017
John E. Connett First-Year Student Award, University of Minnesota	2016
Shirley M. Ehrenkranz Scholarship, New York University	2012
Outstanding Undergraduate Thesis Award, Zhejiang University	2011
First Prize, National Olympiad in Informatics, China	2002-2004 & 2006

SOFTWARE

1. KnockoffHybrid: R package for the identification of putative causal variants with false discovery rate control in genome-wide association studies using hybrid analysis of both the trio and population designs.
2. KnockoffTrio: R package for the identification of putative causal loci with false discovery rate control in genome-wide association studies for family trio and duo data. It also provides a meta-analysis module for combining results of multiple studies.
3. HSVS-M: R package for the multivariate hierarchically structured variable selection (HSVS-M) that tests multi-variant multi-trait association using summary statistics.
4. HSVS-A: R package for the adaptive hierarchically structured variable selection (HSVS-A) for rare-variant association testing using genotype data.

ACADEMIC SERVICES

1. Reviewer: Cell Genomics, Genetics, Scientific Reports, Journal of Statistical Theory and Practice, Communications in Statistics - Simulation and Computation
2. Senate member: The University Senate of City University of Hong Kong (2022 - Present)
3. Board member: College of Science at City University of Hong Kong (2022 - 2024)
4. Seminar chair: Biostatistics Seminar Series at City University of Hong Kong (2022 - Present)
5. Committee member: College Graduate Studies Committee (Research Degrees) at City University of Hong Kong (2024 - Present)