Yi Yang

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

Phone: +1-612-594-0835
Email: yi.yang@cityu.edu.hk
Homepage: yiyangphd.github.io

EDUCATION

PhD in Biostatistics, University of Minnesota — Jun 2020
MS in Biostatistics, University of Minnesota — Aug 2017
Master of Social Work, New York University — May 2013
BS in Management Information Systems, Chu Kochen Honors College, Zhejiang University — Jun 2011

RESEARCH EXPERIENCE

Postdoctoral Research Scientist, Department of Biostatistics, Columbia University Jul 2020 – Jun 2022
Advisor: Dr. Iuliana Ionita-Laza
Knockoff statistics for variable selection in family-based genome-wide association studies

Research Assistant, Division of Biostatistics, University of Minnesota May 2016 – Jun 2020
Advisors: Dr. Lin Zhang and Dr. Saonli Basu
Bayesian hierarchical models for variable selection in genome-wide association studies

Advisor: Dr. James Hodges
Advanced treatment for pancreatitis: a prospective observational study of TPIAT (POST)
An observational study of dental outcomes in head and neck cancer patients (OraRad)

TEACHING EXPERIENCE

Teaching Assistant, Division of Biostatistics, University of Minnesota Sep 2015 – May 2016
Audience: graduate students in allied health sciences
PubH 6450 Biostatistics 1; PubH 6414 Biostatistics Literacy

Lecturer, School of Management, Zhicheng College, Fuzhou University Aug 2013 – Jul 2015
Audience: second- and third-year undergraduate students
Probability and Statistics; Database Systems; Computer Networks; Management Information Systems

PUBLICATIONS

* Corresponding author

1. **Yang, Y.***, Basu, S., & Zhang, L. (2021). A Bayesian hierarchically structured prior for gene-based association test with multiple traits in genome-wide association studies. *Genetic Epidemiology*, 46 (1), 63-72.
2. **Yang, Y.***, Basu, S., & Zhang, L. (2021). A Bayesian hierarchically structured prior for rare-variant association testing. *Genetic Epidemiology*, 45(4), 413-424.
3. **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.
4. **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.
5. Harindhanavudhi, T., **Yang, Y.**, Hodges, J., Pruett, T., Kirchner, V., Beilman, G., & Bellin, M. (2021). Body weight and body composition in patients with chronic pancreatitis are associated with islet

function after total pancreatectomy and islet cell transplantation. *Journal of Clinical Endocrinology & Metabolism*, 106(2), e496–e506.

6. 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*, https://doi.org/10.1016/j.pan.2021.09.011.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.

Forthcoming

15. **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. Under review.

INVITED AND CONTRIBUTED PRESENTATIONS

Invited:

1. Columbia University Center for Precision Medicine and Genomics and Institute for Genomic Medicine, New York, NY. "KnockoffTrio: Variable selection in genetic association studies with trio design", June 2022.
2. City University of Hong Kong School of Data Science, Hong Kong, China. "Knockoff statistics for variable selection in genetic association studies with trio design", Mar 2022.
3. Beijing Normal University Young Scholars Forum, Beijing, China. "Bayesian hierarchical models and

knockoff statistics for variable selection", Dec 2021.

Contributed:

4. Columbia University Irving Medical Center Statistical Genetics Journal Club, New York, NY. "Knockoff statistics and applications to genome-wide association studies", May 2021.
5. The 2019 Joint Statistical Meetings (JSM), Denver, CO. "A Bayesian hierarchical variable selection prior for pathway-based GWAS using summary statistics", July 2019.
6. The 2019 American Statistical Association (ASA) Twin Cities Chapter spring event, Minneapolis, MN. Poster presentation, "A Bayesian hierarchical variable selection prior for pathway-based GWAS using summary statistics", April 2019.
7. The 2018 Joint Statistical Meetings (JSM), Vancouver, BC, Canada. "A Bayesian gene-based GWAS analysis of osteosarcoma trio data using a hierarchically structured prior", July 2018.

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 DEVELOPMENT

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

ACADEMIC SERVICES

Peer review: Cell Genomics