PENG YANG

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EDUCATION

Rice University *January 2020 - Present*
Ph.D. in Statistics, Department of Statistics
Co-Advisors: Ying Yuan, Ph.D., and Ziyi Li, Ph.D.
GPA: 3.98/4.00

Rice University *December 2019*
M.S. in Statistics, Department of Statistics

Ningbo University *May 2018*
B.S. in Applied Mathematics

PUBLICATIONS

(† denotes co-first authorship; these authors contributed equally)

Accepted

1. **Peng Yang**, Daniel Li, Ruitao Lin, Bo Huang, and Ying Yuan. (2024) Design and sample size determination for multiple-dose randomized phase II trials for dose optimization. *Statistics in Medicine.* **43**, 2972-2986.

2. **Peng Yang**, Shawna M. Hubert, P. Andrew Futreal, Xingzhi Song, Jianhua Zhang, J. Jack Lee, Ignacio Wistuba, Ying Yuan, Jianjun Zhang, and Ziyi Li. (2024) A novel Bayesian model for assessing intratumor heterogeneity of tumor infiltrating leukocytes with multi-region gene expression sequencing. *Annals of Applied Statistics.* **18**, 1879-1898.

3. **Peng Yang**, Yuansong Zhao, Lei Nie, Jonathon Vallejo, and Ying Yuan. (2023) SAM: Self-adapting mixture prior to dynamically borrow information from historical data in clinical trials. *Biometrics.* **79**, 2857-2868.

4. Shaolong Cao, Jennifer R. Wang, Shuangxi Ji, **Peng Yang**, Yaoyi Dai, Shuai Guo, Matthew D. Montierth, John Paul Shen, and Others. (2022) Estimation of tumor cell total mRNA expression in 15 cancer types predicts disease progression. *Nature Biotechnology.* **40**, 1624-1633.

5. Vahid Bahrambeigi, Jaewon J. Lee, Vittorio Branchi, Kimal I. Rajapakshe, Zhichao Xu, Naishu Kui, Jason T. Henry, Wang Kun, Bret M. Stephens, Sarah Dhebat, Mark W. Hurd, Ryan Sun, **Peng Yang**, Eytan Ruppin, Wenyi Wang, Scott Kopetz, Anirban Maitra, and Paola A. Guerrero. (2024) Transcriptomic Profiling of Plasma Extracellular Vesicles Enables Reliable Annotation of the Cancer-specific Transcriptome and Molecular Subtype. *Cancer Research.* **84**, 1719-1732.

Submitted

1. **Peng Yang**, Yeohee Park, Ying Yuan, and Suyu Liu. (2024) A Bayesian Adaptive Design for Avatar-Driven Cancer Clinical Trials. *Submitted to Journal of the American Statistical Association.*

2. Linjie Luo†, **Peng Yang**†, Sofia Mastoraki, Xiayu Rao, Yan Wang, Nicole M. Kettner, Akshara Singareeka Raghavendra, Debasish Tripathy, Senthil Damodaran, Kelly K. Hunt, Jing Wang, Ziyi Li, and Khandan Keyomarsi. (2024) Single-Cell RNA Sequencing Identifies Molecular Biomarkers

Predicting Late Progression to CDK4/6 Inhibition in Metastatic HR+/HER2- Breast Cancer. *Submitted to Nature Communication.*

3. Mitchell L. Ramsey, Dhiraj Yadav, **Peng Yang**, Liang Li, Melena Bellin, William E. Fisher, Evan L. Fogel, Christopher E. Forsmark, Phil A Hart, Walter Park, Stephen J. Pandol, Jose Serrano, Temel Tirkes, Mark Topazian, Stephen Van Den Eeden, Santhi Swaroop Vege, Darwin L. Conwell. (2024) Exocrine Pancreatic Dysfunction in Chronic Pancreatitis: Analysis of the PROCEED Study.

4. Shrabanti Chowdhury, Sammy Ferri-Borgogno, **Peng Yang**, Wenyi Wang, Jie Peng, Samuel Mok, and Pei Wang. (2024) Learning directed acyclic graphs for ligands and receptors based on spatially resolved transcriptomic analysis of ovarian cancer.

In preparation

1. **Peng Yang**, Ruitao Lin, and Ying Yuan. (2024) Sync Twins: Enhance treatment effect estimation for decentralized clinical trial.

2. Ruoxing Li, **Peng Yang**, Lulu Shang, and Ziyi Li. (2024) PASTA: pathway-oriented expression imputation for spatial transcriptomics data.

Book Chapters

1. Ziyi Li and **Peng Yang**. (2024) Transcriptome data analysis: Methods in Molecular Biology. Humana Press.

HONORS AND AWARDS

· ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop Student Travel Award (2023)

· ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop Student Poster Award (2023)

· ASA Section on Statistics in Genomics and Genetics (SGG) Student Paper Award (2023)

· Zhengjiang State Scholarship (2017)

· National Mathematical Modeling Contest First Prize (2016)

· "Shenzhan Cup" Mathematical Modeling Challenge Student Paper Award (2016)

· Honorable Mention in Mathematical Contest in Modeling (2016)

· Ningbo University Scholarship (2015)

CONFERENCE ACTIVITIES

Oral Presentation

· Design and Sample Size Determination for Multiple-dose Randomized Phase II Trials for Dose Optimization, *Joint Statistical Meeting (JSM)*, Portland, OR, August 2024.

· Design and Sample Size Determination for Multiple-dose Randomized Phase II Trials for Dose Optimization, *Eastern North American Region (ENAR)*, Baltimore, MD, March 2024.

· A Novel Bayesian Model for Assessing Intratumor Heterogeneity of Tumor Infiltrating Leukocytes with Multi-Region Gene Expression Sequencing, *Joint Statistical Meeting (JSM)*, Toronto, Canada, August 2023.

· Design and Sample Size Determination for Multiple-dose Randomized Phase II Trials for Dose Optimization, *New England Statistical Society (NESS)*, Boston, MA, June 2023.

Poster Presentation

· Design and Sample Size Determination for Multiple-dose Randomized Phase II Trials for Dose Optimization, *The ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop*, Washington DC, September 2023.

· A Novel Bayesian Model for Assessing Intratumor Heterogeneity of Tumor Infiltrating Leukocytes with Multi-Region Gene Expression Sequencing, *Advances in Statistical and Computational Methods for Analysis of Biomedical, Genetic, and Omics Data (ABGOD)*, Dallas, TX, March 2023.

TEACHING EXPERIENCE

Rice University
Graduate Teaching Assistant

· Biostatistics (STAT 553)	*Spring 2020*
· Intro to Bioinformatics (STAT 623)	*Spring 2022*

Ph.D. mentor for D2K Learning Lab (DSCI 435)

· TxDOT Construction Bid Optimization	*Spring 2023*

PROFESSIONAL SERVICES

Journal Referee

· Pharmaceutical Statistics

· Journal of Biopharmaceutical Statistics

· PLOS Genetics

· Journal of Applied Statistics

· Biometrical Journal

· SoftwareX

· Frontiers in Genetics

· Computational Biology and Chemistry

· Medical Oncology