Quefeng Li

CONTACT INFORMATION	Department of Biostatistics 3105D McGavran-Greenberg Hall, Chapel Hill, NC 27599	*Phone:* (919)962-6450 *Email:* quefeng@email.unc.edu *Website:* http://www.bios.unc.edu/~quefeng

RESEARCH INTERESTS

High dimensional statistics with applications in biomedical research, neuroimaging analysis, data integration, robust statistics.

EMPLOYMENT

Associate Professor with tenure, Department of Biostatistics, UNC.	*2021 – now*
Assistant Professor, Department of Biostatistics, UNC.	*2015 – 2021*
Faculty Fellow, SAMSI.	*2016 – 2017*
Postdoctoral Research Associate, Department of ORFE, Princeton University.	*2013 – 2015*

EDUCATION

Ph.D., *Statistics*, University of Wisconsin at Madison, USA.	*2008 – 2013*
B.S., *Mathematics*, Nanjing University, China.	*2002 – 2006*

AWARDS

Gillings Research Excellence Award, UNC.	*2023*
Junior Faculty Development Award, UNC.	*2018*
University Research Council Award, UNC.	*2016*

PUBLICATION (STATISTICAL METHODOLOGY)

* denotes supervised student.

[1] Heiling, H.*, Rashid, N., **Li, Q.**, Peng, X., Yeh, J., and Ibrahim, J. (2024+). Efficient Computation of High-Dimensional Penalized Generalized Linear Mixed Models by Latent Factor Modeling of the Random Effects. *Biometrics*, in press.

[2] Wang, P.*, Wang, H.*, **Li, Q.**, Shen, D., and Liu, Y. (2024+). Joint and Individual Component Regression. *Journal of Computational and Graphical Statistics*, in press.

[3] Heiling, H.*, Rashid, N., **Li, Q.**, and Ibrahim, J. (2024+). glmmPen: High Dimensional Penalized Generalized Linear Mixed Models. *The R Journal*, in press.

[4] Wang, H.*, **Li, Q.**, and Liu, Y. (2024+). Multi-response Regression for Block-missing Multimodal Data without Imputation. *Statistica Sinica*, in press.

[5] Chen, J., **Li, Q.**, and Chen, H.Y. (2023). Testing Generalized Linear Models with High-dimensional Null Hypothesis. *Biometrika*, 110:83–99.

[6] Liu, Y.*, Darville, T., Zheng, X., and **Li, Q.** (2023). Decomposition of Variation of Mixed Variables by a Latent Mixed Gaussian Copula Model. *Biometrics*, 2:1187–1200.

[7] Yang, H.*, Lin, D.Y., and **Li, Q.** (2023). An Efficient Greedy Search Algorithm for High-dimensional Linear Discriminant Analysis. *Statistica Sinica*, 33:1–22.

[8] Wang, P.*, **Li, Q.**, Shen, D., and Liu, Y. (2023). High-Dimensional Factor Regression for Heterogeneous Subpopulations. *Statistica Sinica*, 33:1–27.

[9] Wang, H.*, **Li, Q.**, and Liu, Y. (2023). Adaptive Supervised Learning on Data Streams in Reproducing Kernel Hilbert Spaces with Data Sparsity Constraint. *Stat*, 12:e514.

[10] Wang, H.*, **Li, Q.**, and Liu, Y. (2022). Regularized Buckley-James Method for Right-censored Outcomes with Block-missing Multi-modal Covariates. *Stat*, 11:e515.

[11] Jiang, H., **Li, Q.**, Lin, J., and Lin, F. (2022). Classification of Disease Recurring using Transition Likelihoods with EM Algorithm. *Statistics in Medicine*, 41:4697–4715.

[12] Liu, Y.*, Lin, J., Lin, F., and **Li, Q.** (2022). Dynamic Classification of Plasmodium vivax Malaria Recurrence: An Application of Classifying Unknown Cause of Failure in Competing Risks. *Journal of Data Science*, 20: 51–78.

[13] **Li, Q.** and Li, L. (2022). Integrative Factor Regression and Its Inference for Multimodal Data Analysis. *Journal of the American Statistical Association*, 117:2207–2221.

[14] Lin, F., **Li, Q.**, and Lin, J. (2020). Relapse or Reinfection: Classification of Malaria Infection Using Transition Likelihoods. *Biometrics*, 76:1351–1363.

[15] Rashid, N., **Li, Q.**, Yeh, J., and Ibrahim, J. (2020). Modeling Between-Study Heterogeneity for Reproducible Gene Signature Selection and Clinical Prediction. *Journal of the American Statistical Association*, 115:1125–1138.

[16] Yu, G., **Li, Q.**, Shen, D., and Liu, Y. (2020). Optimal Sparse Linear Prediction for Block-missing Multi-modality Data without Imputation. *Journal of the American Statistical Association*, 115:1406–1419.

[17] Li, X., **Li, Q.**, Zeng, D., Marder, K., Paulsen, J., and Wang, Y. (2020). Time-varying Hazards Model Incorporating Irregularly Measured High-dimensional Biomarkers. *Statistica Sinica*, 30:1605–1632.

[18] Ta, T., Shao, J., **Li, Q.**, and Wang, L. (2020). Generalized Regression Estimators with High-Dimensional Covariates. *Statistica Sinica*, 30:1135–1154.

[19] **Li, Q.** and Li, L. (2018). Integrative Linear Discriminant Analysis with Guaranteed Error Rate Improvement. *Biometrika*, 105:917–930.

[20] Avella-Medina, M., Battey, H., Fan, J., and **Li, Q.** (2018). Robust Estimation of High Dimensional Covariance and Precision Matrices. *Biometrika*, 105:271–284.

[21] **Li, Q.**, Cheng, G., Fan, J., and Wang, Y. (2018). Embracing the Blessing of Dimensionality in Factor Models. *Journal of the American Statistical Association*, 113:380–389.

[22] **Li, Q.**, Yu, M., and Wang, S. (2017). A Statistical Framework for Pathway and Gene Identification from Integrative Analysis. *Journal of Multivariate Analysis*, 156:1–17.

[23] Fan, J., **Li, Q.**, and Wang, Y. (2017). Estimation of High-Dimensional Mean Regression in Absence of Symmetry and Light-tail Assumptions. *Journal of the Royal Statistical Society: Series B*, 79:247–265.

[24] **Li, Q.** and Shao, J. (2015). Regularized LASSO: A Consistent Variable Selection Method. *Statistica Sinica*, 25:975–992.

[25] **Li, Q.** and Shao, J. (2015). Sparse Quadratic Discriminant Analysis for High Dimensional Data. *Statistica Sinica*, 25:457–473.

[26] Xu, Y., Yu, M., Zhao, Y. Q., **Li, Q.**, Wang, S., and Shao, J. (2015). Regularized Outcome Weighted Subgroup Identification for Differential Treatment Effects. *Biometrics*, 7:645–653. PMID: 25962845.

[27] **Li, Q.**, Wang, S., Huang, C., Yu, M., and Shao, J. (2014). Meta-analysis Based Variable Selection for Gene Expression Data. *Biometrics*, 70:872–880. PMID: 25196635.

PUBLICATION (COLLABORATIVE WORK) *denotes supervised student.

[28] Merlo, A., Bensimhon, H., Watkins, R., Yu, Z.*, **Li, Q.**, Chang, P., and Byku, M. (2024+). Use of mechanical circulatory support and survival for heart and heart-kidney transplant recipients in the new allocation system. *The Journal of Heart and Lung Transplantation*, in press.

[29] Chang, E., Tugman, M., Assimon, M., Gilet, C., Ge, R.*, **Li, Q.**, and Flythe, J. (2024). Lung Ultrasound, Bioimpedance Spectroscopy, and Physical Examination for Volume Assessment in Hospitalized Hemodialysis Patients: a Diagnostic Test Study. *Kidney Medicine*, 6:100764.

[30] Kim, K., Bird, J., Keet, C., Virkud, Y. Herlihy, L., Ye, P., Smeekens, J., Guo, R., Yue, X., Penumarti, A., Qaqish, B., **Li, Q.**, Kulis, M., and Burks, A. (2024). Desensitization and Remission after Peanut Sublingual Immunotherapy in 1- to 4-year-old Peanut-Allergic Children: a Randomized, Placebo-Controlled Trial. *The Journal of Allergy and Clinical Immunology*, 153:173–181.

[31] Daw, J., Armbruster, T., Deyo, Z., Walker, J., Rosman, L, Sears, S, Mazzella, A., Jin, W.*, **Li, Q.**, and Gehi, A. (2023). Development and Feasibility of a Primary Care Provider Training Intervention to Improve Atrial Fibrillation Management. *The American Journal of Cardiology*, 207: 184–191.

[32] Yu, Z.*, Shi, Z., Dan, T., Dere, M., Kim, M., **Li, Q.**, and Wu, G. (2023). Uncovering Diverse Mechanistic Spreading Pathways in Disease Progression of Alzheimer's Disease. *Journal of Alzheimers Disease Reports*, 7:855–872.

[33] Bhatia, M., Scheiber, C., Arora, S., Gustafson, C., Funk, I., Grosshuesch, C., Simmers, C., **Li, Q.**, Liu, Y*, Smeltz, A. (2023). Should all patients with pulmonary hypertension undergoing non-cardiac surgery be managed by cardiothoracic fellowship-trained anesthesiologists? *Seminars in Cardiothoracic and Vascular Anesthesia*, 27:305–312.

[34] Kim, E., Keet, C., Hamilton, D., Chin, S., Ye, P., Penumarti, A., Yue, X., Guo R., Smeekens, J., Virkud, Y., **Li, Q.**, Kosorok, M., Kulis, M., and Burks, A. (2023). Open-label study of the efficacy, safety and durability of peanut sublingual immunotherapy in peanut-allergic children. *The Journal of Allergy and Clinical Immunology*, 151:1558–1565.

[35] Zhou, J., Cipriani, A., Liu, Y.*, Fang, G., **Li, Q.**, and Cao, Y. (2023). Mapping Lesion-Specific Response and Progression Dynamics and Inter-Organ Variability in Metastatic Colorectal Cancer. *Nature Communications*, 14:417.

[36] Bellotti, A., Arora, S., Gustafson, C., Funk, I., Grosshuesch, C., Simmers, C., **Li, Q.**, Liu, Y.*, and Smeltz, A. (2022). Predictors of post-induction hypotension for patients with severe pulmonary hypertension. *Cureus*, 14: e31887.

[37] Arora, H., Encarnacion, J., Sessler, D., **Li, Q.**, Liu, Y.*, Kumar, P., and Smeltz, A. (2022). Hypothermia and Prolonged Time from Procedure End to Extubation After Endovascular Thoracic Aortic Surgery. *Journal of Cardiothoracic and Vascular Anesthesia*, 36:4320–4326.

[38] Chen, J., Ricardo, A., Reid, K., Lash, J., Chung, J., Patel, S., Daviglus, M., Huang, T., Chen, H., Liu, L., Hernandez, R., **Li, Q.**, Redline, S. (2022). Sleep, Cardiovascular Risk Factors, and Kidney Function: The Multi-Ethnic Study of Atherosclerosis (MESA). *Sleep Health*, 8:648–653.

[39] Flythe, J., Assimon, M., Tugman, M., Narendra, J., Singh, S., Jin, W.*, **Li, Q.**, Bansal, N., Hostetter, T., and Dember, L. (2022). Efficacy, Safety, and Tolerability of Oral Furosemide among Patients Receiving Hemodialysis: A Pilot Study. *Kidney International Reports*, 7:P2186–2195.

[40] Kulis, M., Smeekens, J., Burk, C., Yue, X., Guo, R., Orgel, K., Ye, P., Herlihy, L., Hamilton, D., **Li, Q.**, Shereffler, W., Vickery, B., Kim, E., and Burks, W. (2022). Kinetics of basophil hyporesponsiveness during short-course peanut OIT. *Journal of Allergy and Clinical Immunology*, 86:1805–1816.

[41] Narla, V., Yang, H.[*], and **Li, Q.** (2022). Outcomes of Implantable Cardioverter-Defibrillator Implantation in HIV-Infected Patients: A Single Center Retrospective Cohort Study. *Clinical Cardiology*, 45:857–863.

[42] Hill, J., Seguin, R., Manda, A., Chikasema, M., Vaz, O., **Li, Q.**, Yang, H.[*], Gopal, S., Smith, J. (2022). Prevalence of Traditional, Complementary, and Alternative Medicine (TCAM) Among Adult Cancer Patients in Malawi. *Cancer Causes & Control*, 33:1047–1057.

[43] Li, W., Yang, D., Yan, C., Chen, M., **Li, Q.**, Zhu, W., Wu, G., and ADNI. (2022). Characterizing Network Selectiveness to the Dynamic Spreading of Neuropathological Events in Alzheimer's Disease. *Journal of Alzheimer's Disease*, 86:1805–1816.

[44] Lindsey, R., Mazzella, A., Gehi, A., Liu, Y.[*], **Li, Q.**, Salmoirago-Blotcher, E., Lampert, R., Burg, M. (2022). Immediate and Long-term Effects of the COVID-19 Pandemic and Lockdown on Objectively-Measured Physical Activity in Patients with Implanted Cardiac Devices. *Pacing and Clinical Electrophysiology*, 45:111–123.

[45] Davis, E., Coakley, R., Labamba, B., Rowell, T., Dang, H., Pawlak, E., **Li, Q.**, Alexis, N., Ribeiro, C., Tarran, R. (2022). Chronic E-Cigarette Exposure Alters Human Alveolar Macrophage Morphology and Gene Expression. *Nicotine & Tobacco Research*, 24:395–399.

[46] Specht, B., Buse, C., Phelps, J., Chiavacci, S., Harrell, L. Nelson, J., Poulos, K., **Li, Q.**, Liu, Y.[*], Lupa, C. (2021). Virtual Reality After Surgery (VRAS) – A Method to Decrease Pain After Surgery in Pediatric Patients. *The American Surgeon*, Jul 17:31348211032204.

[47] Rosman, L., Salmoirago-Blotcher, E., Mahmood, R., Yang, H.[*], **Li, Q.**, Mazzella, A., Klein, J., Hanks, J., Bumgarner, J., Gehi, A. (2021). Arrhythmia Risk During the 2016 United States Presidential Election: The Cost of Stressful Politics. *Journal of the American Heart Association*, 10:e020559.

[48] Zhou, J., **Li, Q.**, Cao, Y. (2021). Spatiotemporal Heterogeneity across Metastases and Organ-Specific Response Informs Drug Efficacy and Patient Survival in Colorectal Cancer. *Cancer Research*, 81:2522–2533.

[49] Hallman, M., Dorinsky, N., Wang, Y.[*], **Li, Q.**, Isaak, R., Kolarczyk, L., Kim, H., Lobonc, A. (2021). Objective Pain Assessment using Incentive Spirometry Values. *Pain Management*, 11:315–324.

[50] Mazzela, A., Hendrickson, M., Aurora, S., Sanders, M., **Li, Q.**, Vavalle, J., Gehi, A. (2021). Shifting Trends in Timing of Pacemaker Implantation After Transcatheter Aortic Valve Replacement. *JACC: Cardiovascular Interventions*, 14:232–234.

[51] Flythe, J., Tugman, M., Narendra, J., Assimon, M., **Li, Q.**, Wang, Y.[*], Brunelli, S., Hinderliter, A. (2021). Effect of ultrafiltration profiling on outcomes among maintenance hemodialysis patients: a randomized crossover trial. *Journal of Nephrology*, 34:113–123.

[52] Straube, L., Fardelmann, K., Penwarden, A., Harker, E., Redmon, B., **Li, Q.**, Strauss, R., Smith, K. (2020). Nitrous Oxide Analgesia for External Cephalic Version: A Randomized Control Trial. *Journal of Clinical Anesthesia*, 68:110073.

[53] Mazzella, A., Sanders, M., Yang, H.[*], **Li, Q.**, Vavalle, J., Gehi, A. (2020). Predicting Need for Pacemaker Implantation Early and Late After Transcatheter Aortic Valve Implantation.

Catheterization and Cardiovascular Interventions, 2020:19.

[54] Beckman J., **Li, Q.**, Smith, T., Hester, S., Leitner, O., Karen, S., Kasthuri, R. (2020). Integration of Clinical Parameters, Genotype and Epistaxis Severity Score to Guide Treatment for Hereditary Hemorrhagic Telangiectasia Associated Bleeding. *Orphaned Journal of Rare Diseases*, 15:185.

[55] Rohner, E., McGuire F. H., Liu, Y.[*], **Li, Q.**, Miele, K., Desai, S. A., Schmitt, J., Knittel, A., Nelson, J., Edelman, C., Sivaraman, V., Baker, A., Romocki, L., Rahangdale, L., Smith, J. (2020). Racial and Ethnic Differences in Acceptability of Urine and Cervico-Vaginal Sample Self-Collection for HPV-Based Cervical Cancer Screening. *Journal of Women's Health*, 29:7.

[56] Wang, Y.[*], Yang, D., **Li, Q.**, Kaufer, D., Styner, M., Wu, G. (2020). Characterize the Propagation Pattern of Neurodegeneartion in Alzheimer's Disease by Longitudinal Network Analysis. *Proceedings of the 20th IEEE International Symposium on Biomedical Imaging (ISBI)*, 292–295.

[57] Zhou, J., Liu, Y.[*], Zhang, Y., **Li, Q.**, Cao, Y. (2020). Modeling Tumor Evolutionary Dynamics to Predict Clinical Outcomes for Patients with Metastatic Colorectal Cancer: A Retrospective Analysis. *Cancer Research*, 80:591–601.

[58] Zhong, W.[*], Dong, L.[*], Poston, T., Darville, T., **Li, Q.**, Zheng, X. (2020). Inferring Regulatory Network from Mixed Observational Data Using the Directed Acyclic Graph. *Frontiers in Genetics*, 11:8.

[59] Kim, E., Yang, L., Ye, P., Guo, R., **Li, Q.**, Kulis, M., Burks, W. (2019). Long-term Sublingual Immunotherapy for Peanut Allergy in Children: Clinical and Immunologic Evidence of Desensitization. *Journal of Allergy and Clinical Immunology*, 144: 1320–1326.

[60] Tugman, M., Narenda J., **Li, Q.**, Wang, Y.[*], Hinderliter, A., Brunelli, S., Flythe, J. (2019). Ultrafiltration Profiled Hemodialysis to Reduce Dialysis-related Cardiovascular Stress: Study Protocol for a Randomized Controlled Trial. *ContemporaryClinicalTrialsCommunications*, 15:100415.

[61] Dineen, H., Eskildsen, S., Gan, Z., **Li, Q.**, Patterson, B., Patterson, J., Draeger, R. (2019). Gender Preferences of Patients when Selecting Orthopaedic Providers. *Iowa Orthopaedic Journal*, 39:203–210.

[62] Cummings, D., Adams, A., Halladay, J., Hinderliter, A., Donahue, K., Cene, C., **Li, Q.**, Miller, C., Garcia, B., Tillman, J., Little, E., DeWalt, D. (2019). Race-Specific Patterns of Treatment Intensification among Hypertensive Patients using Home Blood Pressure Monitoring: Analysis Using Defined Daily Doses in the Heart Healthy Lenoir Study. *The Annals of Pharmacotherapy*, 53:333–340.

[63] Hill, J., Mills, C., **Li, Q.**, Smith, J. (2019). The Prevalence of Traditional, Complementary, and Alternative Medicine Use by Cancer Patients in Low Income and Lower-Middle Income Countries; a Systematic Review. *Global Public Health*, 14: 418–430.

[64] Kulis, M., Yue, X., Guo, R., Zhang, H., Orgel, K., Ye, P., **Li, Q.**, Liu, Y.[*], Kim, E., Burks, A., Vickery, B. (2019). High and Low Dose Oral Immunotherapy Similarly Suppress Pro-Allergic Cytokines and Basophil Activation in Young Children. *Clinical and Experimental Allergy*, 49:180–189.

[65] Jones, S.[*], **Li, Q.**, Aiello, A., O'Rand, A., Roux, A., and Evenson, K. (2018). Correlates of Changes in Walking During the Retirement Transition: The Multi-Ethnic Study of Atherosclerosis. *Preventive Medicine Reports*, 11:221–230.

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[66] Sun, X., Shan, Y.*, **Li, Q.**, Chollet-Hinton, L., Kirk, E., Gierach, G., Troester, M. (2018). Intra-individual Gene Expression Variability of Normal Breast Tissue. *Scientific Reports*, 8:9137.

[67] Wu, J., Cummings, D., **Li, Q.**, Halladay, J., Donahue, K., Cene, C., M.D., Hinderliter, A., Bosworth, H., Miller, C., Garcia, B., Tillman, J., DeWalt, D. (2018). The Effect of a Practice-based Multi-component Intervention that Includes Health Coaching on Medication Adherence and Blood Pressure Control in Rural Primary Care. *Journal of Clinical Hypertension*, 20:757–764.

[68] Jones, S.*, **Li, Q.**, Aiello, A., O'Rand, A., Turkbey E., Roux, A., and Evenson, K. (2018). Physical Activity, Sedentary Behavior, and Retirement: the Multi-Ethnic Study of Atherosclerosis (MESA). *American Journal of Preventive Medicine*, 54:786–794.

[69] Halladay, J., Donahue K., Cene C.W., **Li, Q.**, Cummings, D., Hinderliter, A., Miller, C., Garcia B., Little, E. Tillman, J., Ammerman, A., DeWalt, D. (2016). The Association of Health Literacy and Blood Pressure Reduction in a Cohort of Patients with Hypertension: The Heart Healthy Lenoir Trial. *Patient Education and Counseling*, 100:542–549.

[70] Scerpella, T.A., Bernardoni, B., Wang, S., Rathouz P.J., **Li, Q.**, and Dowthwaite, J.N. (2016). Site-Specific, Adult Bone Benefits Attributed to Loading During Youth: A Preliminary Longitudinal Analysis. *Bone*. 85:148–159. PMID: 26826335.

[71] Bernardoni, B., Scerpella, T.A., Rosenbaum, P.F., Kanaley, J.A., **Li, Q.**, Wang, S. and Dowthwaite, J.N. (2015). The Influence of Organized Physical Activity (Including Gymnastics) on Young Adult Skeletal Traits: Is Maturity Phase Important? *Pediatric Exercise Science*. 27:285–296. PMID: 25386845.

[72] Bernardoni, B., Thein-Nissenbaum, J., Fast, J., Day, M., Wang, S., **Li, Q.**, and Scerpella, T.A. (2014). A School-Based Resistance Intervention Improves Skeletal Growth in Adolescent Females. *Osteoporosis International*. 25:1025–1032. PMID: 24114402. PMCID: PMC4118457.

[73] Coursin, D., Head, D., Chen, G., **Li, Q.**, Wang, S. and Hogan, K. (2014). Vitamin D Deficiency in Anesthesia Caregivers at the End of Winter. *Acta Anaesthesiologica Scandinavica*. 58:802–806. PMID: 25040952.

PUBLICATION (OTHERS)

[74] Yu, M. and **Li, Q.** (2014). Discussion of "Combining Biomarkers to Optimize Patient Treatment Recommendations" by Kang C., Janes, H., and Huang, Y. *Biometrics*. 70:716-719. PMID: 24889402.

PREPRINTS (STATISTICAL METHODOLOGY)

* denotes supervised student.

[1] Liu, T.*, **Li, Q.**, Zheng, X., and Zou, F. (2024+). Adaptive Regularized Tri-factor Non-negative Matrix Factorization for Cell Type Deconvolution.

[2] Yang, Y., Lin, J., **Li, Q.**, and Lin, F. (2024+). Maximum Likelihood Estimation for the Silent Hypnozoite Carriage in a Malaria Randomized Clinical Trial.

[3] Jiang, J., **Li, Q.**, Lin, J., and Lin, F. (2024+). Classification of Competing Risks under a Semiparametric Density Ratio Model with Transition of Markers.

[4] Yang, H.* and **Li, Q.** (2024+). Multi-class Classification via Latent Mixed Gaussian Copula Model.

[5] Liu, T.*, **Li, Q.**, and Zou, F. (2024+). Constrained Nonnegative Matrix Factorization Incorporating Knowledge of The Basis Matrix.

[6] Yang, H.*, and **Li, Q.** (2024+). High Dimensional Semiparametric Latent Gaussian Copula

Regression for Mixed Data.

[7] Heiling, H.*, Rashid, N., **Li, Q.**, Peng, X., Yeh, J., and Ibrahim, J. (2024+). Efficient Computation of High-dimensional Penalized Piecewise Constant Hazard Random Effects Survival Models.

PREPRINTS (COLLABORATIVE WORK)

* denotes supervised student.

[8] Rosman, L., Lampert, R., Zhuo, S.*, **Li, Q.**, Varma, N., Burg, M., Gaffey, A., Armbruster, T., and Gehi, A. (2024+). Wearable Devices, Healthcare Use, and Psychological Wellbeing in Patients with Atrial Fibrillation. *Under review in Journal of American Heart Association.*

[9] Mahmood, R., Stearns, C. S., Armbruster, T., Jin, W*, Choudhury, A., Rosman, L., Mazzella, J. A., **Li, Q.**, Biese, K., Gehi, A. (2024+). An Atrial Fibrillation Treatment Pathway in the Emergency Department Reduces Median 30-Day Cost of Care.

[10] Smeltz, A., Farber, M., Parodi, E., **Li, Q.**, Liu, Y.*, Kirsch, R., Hipp, J., Kumar, P., Arora, H. (2024+). Comparison of landmark- versus fluoroscopy-guided cerebrospinal fluid drain-related complications after aortic repairs.

[11] Funk, I., Gustafson, C., **Li, Q.**, Teeter, E., and Smeltz, A.M., (2024+). Hemodynamic Pattern of Myocardial Recovery following Cardiac Transplantation.

ONGOING GRANT SUPPORT

- R01 AG073259   9/2021 – 6/2026
  Statistical Methods for Integrative Analysis of Large Scale Neuroimaging Data
  Role: PI

- R01 AG068399   9/2020 – 8/2024
  Understanding Selectivity Mechanisms of Network Vulnerability and Resilience in Alzheimer's Disease by Establishing a Neurobiological Basis through Network Neuroscience
  Role: Co-I

- U01 TR002764   5/2020 – 4/2024
  Harnessing Clinical Genomic Characterization to Accelerate Translational Advances for Patients with IDD
  Role: Co-I

- MTEC001   7/2020 – 6/2024
  Evaluation of a Microneedle-based Technology for Point-of-care Detection of Infection Biomarkers
  Role: Co-I

- Bristol Myers Squibb Foundation   2/2022 – 1/2025
  Improving Outpatient Comprehensive Atrial Fibrillation Care Across Central North Carolina Through Direct Primary Care Engagement
  Role: Co-I

- P50 CA257911   9/2022 – 8/2027
  Selective Targeting of Pancreatic Cancer SPORE
  Role: Co-I

- R01 CA282648   6/2023 – 3/2028
  Quantitative assessment of angiogenesis using ultrasound multiple scattering
  Role: Subaward PI

- UM1 TR004406   4/2023 – 3/2030
  North Carolina Translational and Clinical Science Institute (NC TraCS) - Biostatistics, Epidemiology, and Research Design (BERD)
  Role: Biostatistician

- DoD OP200066   3/2021 – 2/2025
  A Wearable Sensing System for Continuous Assessment of Outcomes of Orthotic Hand Users in Real-world Settings
  Role: Co-I

- U19 AI144181-01   3/2019 – 2/2024
  University of North Carolina - Chlamydia Vaccine Initiative (UNC-CVI)
  Role: Co-I

- R21 HL154156   9/2020 – 8/2022
  Novel Ultrasonic Methods for the Assessment of Pulmonary Edema
  Role: Co-I

- R03 DK109401   9/2020 – 8/2022
  Diuretic administration for fluid control in hemodialysis patients: a pilot feasibility study
  Role: Biostatistician

- UL1 TR002489   9/2020 – 8/2022
  North Carolina Translational and Clinical Science Institute (NC TraCS) - Biostatistics, Epidemiology, and Research Design (BERD)
  Role: Biostatistician

- R01 HL149683-29A1   4/2020 – 3/2024
  Semiparametric Analysis of Big Censored Data
  Role: Co-I

- R01 AT004435-11   5/2018 – 4/2023
  Sublingual Immunotherapy for Peanut Allergy
  Role: Biostatistician

- K23 DK109401-05   9/2016 – 6/2021
  Investigating Strategies to Reduce Fluid-Related Complications among Hemodialysis Patients
  Role: Co-I

- R21 AG059065   7/2018 – 5/2020
  Longitudinal Analysis of the Dynamic Network Disruptions in Alzheimer's Disease
  Role: Co-I

- R01 GM047845-28   8/1992 – 7/2019
  Semiparametric Analysis of Censored Data in Current Medical Studies
  Role: Co-I

- Junior Faculty Development Award, UNC-Chapel Hill   1/2018 – 12/2018
  Robust Data Integration Methods for Multi-modal Omics Data
  Role: PI

- DMS-1127914   9/2012 – 8/2018
  Statistical and Applied Mathematical Sciences Institute
  Role: Faculty Fellow

- University Research Council Award, UNC-Chapel Hill   5/2016 – 4/2018
  Pathway identification by the integrative analysis of multiple datasets
  Role: PI
- UL1 TR001111-03   9/2013 – 4/2018
  North Carolina Translational & Clinical Sciences Institute (NC TraCS) Biostatistic Services
  Role: Biostatistician
- P50 HL105184-05   8/2010 – 4/2016
  Center for Reducing CVD Disparities: Genes, Clinics, and Communities
  Role: Co-I
- **Statistical Consultant of Department of Anesthesiology, UNC**   5/2018 – 5/2022
  Role: Biostatistician

INVITED TALKS

- The 9th Workshop on Biostatistics and Bioinformatics.   *2024*
- Center for Biomedical Imaging Statistics, Emory University.   *2023*
- School of Statistics and Data Science, Nankai University.   *2023*
- School of Data Science, Fudan University.   *2023*
- The ICSA International Conference, Hong Kong.   *2023*
- School of Management, University of Science and Technology of China.   *2022*
- AISC, Greensboro.   *2022*
- ICSA Canada Chapter Symposium, Banff.   *2022*
- International Conference on Econometrics and Statistics.   *2022*
- School of Statistics and Data Science, Nankai University.   *2021*
- The 34th New England Statistics Symposium.   *2021*
- JSM, Seattle.   *2021*
- AISC, Greensboro.   *2021*
- JSM, Denver.   *2019*
- Big Data and Modern Statistics Conference, Shanghai.   *2019*
- IMS China Conference, Dalian.   *2019*
- The ICSA International Conference, Tianjin.   *2019*
- ICSA Applied Statistics Symposium, Raleigh.   *2019*
- Department of Statistics, North Carolina State University.   *2019*
- Department of Statistics and Operations Research, UNC - Chapel Hill.   *2018*
- ICSA Applied Statistics Symposium, New Brunswick.   *2018*
- Workshop on "Discovery of causal structure in high dimensions", McGill University.   *2018*
- Department of Mathematics and Statistics, University of North Carolina - Greensboro.   *2017*
- ICSA Applied Statistics Symposium, Chicago.   *2017*
- ENAR, Washington DC.   *2017*
- The 10th ICSA International Conference, Shanghai.   *2016*

• AISC, Greensboro.	*2016*
• ICSA Applied Statistics Symposium, Atlanta.	*2016*
• The 4th Institute of Mathematical Statistics Asia Pacific Rim Meeting, Hong Kong.	*2016*
• Department of Biostatistics, University of Michigan - Ann Arbor.	*2015*
• Department of Statistical Sciences, University of Toronto.	*2015*
• Department of Statistics, University of California - Riverside.	*2015*
• Public Health Sciences Division, Fred Hutchinson Cancer Research Center.	*2015*
• Department of Biostatistics, University of North Carolina - Chapel Hill.	*2015*
• Department of Epidemiology, Biostatistics and Occupational Health, McGill University.	*2015*
• Department of Mathematics and Statistics, McGill University.	*2015*
• Department of Biostatistics, Columbia University.	*2015*
• Department of Mathematical Sciences, State University of New York, Binghamton.	*2014*
• Wilks Statistics Seminar, Princeton University.	*2013*

CONTRIBUTED
TALKS

• ENAR, Philadelphia.	*2019*
• ENAR, Atlanta.	*2018*
• JSM, Baltimore.	*2017*
• ENAR, Austin.	*2016*
• JSM, Boston.	*2014*

TEACHING

• BIOS 761: Advanced Probability and Statistical Inference II.	*2017 – now*

STUDENTS

- Post-doc: Zhe Zhang
- PhD students: Wanting Jin, Zhentao Yu, Songcheng Zhuo, Renee Ge, Longfei Zhang, Tianyi Liu (joint with Fei Zou).
- PhD alumni
  - Hannan Yang: graduated in 2022. *Thesis: Statistical Learning Methods for High-dimensional Classification and Regression*. First job: Data scientist at Novartis.
  - Yutong Liu: graduated in 2022. *Thesis: High Dimensional Data Analysis Problems in Infectious Disease Studies*. First job: Data scientist at Moderna.
  - Haodong Wang: graduated in 2022 (joint with Yufeng Liu). *Thesis: Supervised Learning for Complex Data*. First job: Data scientist at Amazon.
- Doctoral dissertation committee: Paloma Hauser (Biostatistics), Mochuan Liu (Biostatistics), Jenny Yang (Biostatistics), Kin Yau Wong (Biostatistics), Yu Deng (Biostatistics), Sydney Jones (Epidemiology), Ran Tao (Biostatistics), Doug Wilson (Biostatistics), David Pritchard (Biostatistics), Li Dong (Biostatistics), Peiyao Wang (Statistics), Jin Wang (Biostatistics), Jiawei Zhou (Pharmacy), Ziliang Zhu (Biostatistics), Beilin Jia (Biostatistics), Hillary Heiling (Biostatistics), Jianqiao Wang (Biostatistics).
- MS alumni: Liyuan Zhou (graduated in 2020).

PROFESSIONAL
SERVICE

- Reviewer of NIH ASPA study session. 2024
- Associate Editor of Journal of Nonparametric Statistics. 2017 – now
- Mentor of a K23 award proposal.
- Reviewer for Annals of Applied Statistics / Annals of the Institute of Statistical Mathematics / Annals of Statistics / Biometrics / Biometrika / Biostatistics / IEEE Transactions on Information Theory / Electronic Journal of Statistics / Journal of Business & Economic Statistics / Journal of Computational and Graphical Statistics / Journal of Econometrics / Journal of Machine Learning Research / Journal of Multivariate Analysis / Journal of the American Statistical Association / Journal of the Royal Statistical Society: Series B / Management Science / Operations Research / Scandinavian Journal of Statistics / Statistica Sinica / Statistics in Medicine.
- Organization committee of Conference on Statistical Learning and Data Science (2016).

COMMITTEE
SERVICE

- Graduate admission committee. 2018 – 2022
- PhD qualify exam committee. 2016 – now
- Graduate study committee. 2015 – now
- Faculty search committee. 2015, 2018, 2024
- Seminar committee. 2015 – 2017

MEMBERSHIP

- Institute of Mathematical Statistics.
- American Statistical Association.
- Eastern North American Region, International Biometric Society.
- International Chinese Statistical Association.