Joshua W Lambert, PhD

CONTACT INFORMATION	College of Nursing University of Cincinnati 3110 Vine St; Procter 214 Cincinnati/OH/45267	(513) 558-5500 joshua.lambert@uc.edu My GitHub Citizenship: United States

RESEARCH INTERESTS Big Data in Health Outcomes, Identifying Interaction Effects in Big Data, Subset Selection, Health Informatics, Machine Learning, Statistical Computing

EDUCATION
2017 PhD Biostatistics and Epidemiology, University of Kentucky
2014 MS in Statistics, University of Kentucky
2010 MS in Mathematics, Murray State University
2009 BS in Mathematics, Murray State University

APPOINTMENTS
August 2018 - Present Assistant Professor, University of Cincinnati
January 2018 - August 2018 Research Assistant Professor, University of Kentucky
January 2015 - December 2017 Statistical Research Coordinator, University of Kentucky
August 2011 - July 2012 Lecturer of Mathematics and Statistics, Eastern Kentucky University
January 2011 - May 2011 Lecturer of Mathematics and Statistics, Murray State University

LICENSING AND CERTIFICATION
2018-2019 CITI certification on Human Subjects Research (HSR) Core

WORKSHOPS & CONFERENCES
2019 Joint Statistical Meetings (JSM)

2016-2019 Auunal Southern Regional Council on Statistics (SRCOS)

2016, 18 Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE)

2015, 16, 17 Annual UT-KBRIN Bioinformatic Summit.

2014 19th Summer Institute in Statistical Genetics at The University of Washington. Modules attended: Mixed Models in Quantitative Genetics, MCMC for Genetics, and Advanced Quantitative Genetics.

SERVICE AND LEADERSHIP
2018-Present University of Cincinnati College of Nursing Institute of Nursing Research Lead Biostatistician

2019-Present University of Cincinnati College of Nursing PhD Preliminary Exam Committee Member

2019-Present University of Cincinnati College of Nursing Faculty Senate IT Committee Member

2019-Present University of Cincinnati College of Nursing Faculty Senate BSN Progression Committee Consultant

2019-Present University of Cincinnati College of Nursing Faculty Senate DNP Program Committee Consultant

National Member, American Statistical Association(ASA)

National Member, Teaching Statistics in Health Sciences Section(ASA)

Local Member, R Users Group Cincinnati Children's Medical Hospital

Regional 2019 Chair of Session on Statistics in Medicine, Southern Regional Council on Statistics

AWARDS AND SCHOLARSHIPS	2019	Southern Regional Council on Statistics Mike Kutner/ASA Travel Award
	2018	Nominated for UKy College of Public Health Golden Apple Award. From student in CPH 630 Biostatistics II.
	2016	Boyd Harshbarger Student Travel Award for travel reimbursement to 2016 Southern Regional Council on Statistics. $500
	2014	19th Summer Institute in Statistical Genetics Workshop Scholarship for module costs and travel reimbursement from Summer Institute in Statistical Genetics at The University of Washington. $2,100
	2010	Summer 2010 research grant from Murray State Water Shed Institute. $2000.
	2010	Research support from Murray State Water Shed Institute. $500

POSTERS AND PRESENTATIONS	2020	Pareto Interaction Ensemble (PIE) Machine via a Feasible Solution Algorithm (FSA). Mathematics and Statistics Department at Old Dominion University. Presentation.
	2019	A Feasible Solution Algorithm for Identifying Pareto-Based Multiobjective Solutions For Subset Selection. Joint Statistical Meetings. July 2019. Poster.
	2019	Introduction to R. College of Nursing, University of Cincinnati, June 2019. Presentation.
	2019	Pareto Optimal Ensembles (POEs) for Machine Learning. SRCOS June 2019. Poster.
	2018	A Feasible Solution Algorithm for Identifying Pareto-Based Multiobjective Solutions For Subset Selection. SRCOS June 2018. Poster.
	2018	Exploring Effect Modifiers Related to Periodontal Diseases Using Data From NHANES. NISBRE June 2018. Poster.
	2018	Lessons Learned in the Presence of Variation. Mathematics and Statistics Colloquium, Murray State University. Presentation.
	2017	Shiny and R: making data and discovery interactive and fun. Biostatistics, Epidemiology, and Research Design (BERD) Pizza and Pilots. Presentation.
	2017	Statistical Assistance for (Kentucky) Regional Investigators. 2017 Kentucky Bioinformatics Retreat. Presentation.
	2017	Introduction to Shiny. 2017 KBRIN Bioinformatics Summit. Presentation.
	2016	Github and R packages. University of Kentucky Statistics Student Seminar.Presentation.
	2016	Providing Statistical Support to Regional State Universities (KBRIN). 2016 NISBRE. Poster.
	2015	Shiny Apps and Shiny Servers. Systems Biology. UKy Omics Integration Journal Club. Presentation.

SOFTWARE	T-Test Calculator, and Chi-Square Calculator. Web Application for uploading your own data and conducting a T and Chi-Square Test. Version 1.0
	rFSA R package for running a Feasible Solution Algorithm to find a set of mth order interactions that are statistically optimal (no one swap can improve the criterion function). Version 0.9.1.
	An Application for a Mulitcore Feasible Solution Algorithm(FSA) for Finding Interactions . Beta Version.
	A REDCap Application which interfaces with R and the REDCap database. Alpha.
	Statistical Genetics Exploration Application. Beta Version.

PUBLICATIONS	2020	Lambert, J. (2019). Statistical Tools for Doctor of Nursing Practice Final Projects. Journal of Nursing Research
	2019	Perazzo, J. D., Currie, J., Horvat Davey, C., Lambert, J., Webel, A. R. (2019). Depression and Social Capital in People Living with HIV. Journal of Psychiatric and Mental Health Nursing.
	2019	Ortiz-Soriano, V., Donaldson, K., Du, G., Li, Y., Lambert, J., Cleland, D., ... Neyra, J. A. (2019). Incidence and Cost of Acute Kidney Injury in Hospitalized Patients with Infective

Endocarditis. Journal of clinical medicine, 8(7), 927.

2019 Emecen-Huja, P., Li, H. F., Ebersole, J. L., Lambert, J., Bush, H. (2019). Epidemiologic evaluation of Nhanes for environmental Factors and periodontal disease. Scientific reports, 9(1), 8227.

2019 Woodward, C. W., Lambert, J., Ortiz-Soriano, V., Li, Y., Ruiz-Conejo, M., Bissell, B., ... Neyra, J. A. (2019). Fluid Overload Associates With Major Adverse Kidney Events in Critically Ill Patients With Acute Kidney Injury Requiring Continuous Renal Replacement Therapy. Critical care medicine.

2019 Gober, M. K., Flight, R. M., Lambert, J., Moseley, H., Stromberg, A., Black, E. P. (2019). Deregulation of a Network of mRNA and miRNA Genes Reveals That CK2 and MEK Inhibitors May Synergize to Induce Apoptosis KRAS-Active NSCLC. Cancer informatics, 18, 1176935119843507.

2019 Adam E, Janes J, Lowney R, Lambert J, Thampi P, Stromberg A, MacLeod J. Chondrogenic differentiation potential of adult and fetal equinecell types. (2019). The American College of Veterinary Surgeons. DOI: 10.1111/vsu.13183

2018 Lambert J, Corrine E, Stromberg AJ, Thompson K. rFSA: An R package for finding best subsets and interactions. (Dec 2018). The R Journal. DOI: 10.32614/RJ-2018-059

2019 Chavan N, Lambert J. 357: Obstetrical hemorrhage: Risk stratification based on clinical, sociodemographic and intrapartum predictors. (2019). American Journal of Obstetrics and Gynecology. DOI: 10.1016/j.ajog.2018.11.378

2018 Ebersole J, Lambert J, Bush H, ..., Basu A. Serum Nutrient Levels and Aging Effects on Periodontitis. (2018). Nutrients. DOI: 10.3390/nu10121986

2018 Sandhu H, Xu Y, Lambert J, Kaplan H. Systemic Immunosuppression and Risk of Age-Related Macular Degeneration. PLoS One. (2018). 13(9):e0203492. DOI: 10.1371/journal.pone

2018 Breheny P, Lambert J, Stromberg A. p-value histograms: Inference and diagnostics. High Throughput. (2018). 7(3). pii: E23. DOI: 10.3390/ht7030023..

2017 Lambert, J, An Exploratory Statistical Method For Finding Interactions In A Large Dataset With An Application Toward Periodontal Diseases. Theses and Dissertations–Epidemiology and Biostatistics.

2017 Grulke E, et al., Differentiating gold nanorod samples using particle size and shape distributions from transmission electron microscope images. Metrologia; DOI 10.1088/1681-7575/aaa368.

2017 Ferrante AB, Lambert J.,Leggas M, Black P, Predicting Student Success Using In-Program Monitoring. American Journal of Pharmaceutical Education 81 (6): 111. DOI 10.5688/ajpe816111.

2017 Grulke E, et al., Size and shape distributions of primary crystallites in titania aggregates. Advanced Powder Technology 28(7). DOI 10.1016/j.apt.2017.03.027.

2014 Slavova, S, Bunn, T, and Lambert, J. Drug Overdose Deaths, Hospitalizations, and Emergency Department Visits in Kentucky, 2000-2012.

2013 Lambert, J, and Slavova, S. Suicide and Suicide Attempts in Kentucky, 2001-2012.

GRANT
SUPPORT

Ongoing University of Cincinnati. (MPI: Arter, S and Lambert, J).07/2019-12/2020. Title: Untangling the Complex Relationships between Prenatal Opioid Exposure and Outcomes. Goals: This study will focus on cleaning/prepping data from the Maternal and Infant Data Hub and running further preliminary analysis on data. Role: PI. Effort: 0 Calendar Months.

Ongoing Ohio Bureau of Workers Compensation: Ohio Occupational Safety and Health Research Program (PI: Clark, A and Gillespie, G) . 6/01/2019-5/31/2021 Title: General Electric Aviation Safe Treatment and Opioid Management (STOMP) Program. Goals: GE STOMP is an educational intervention aimed at the prevention and treatment of opioid abuse among injured and at-risk GE Aviation employees. This educational intervention study will target GE Aviation employees by developing, implementing, and determining the effects of an educational intervention for GE Aviation employees experiencing an occupational or recreational injury or scheduled for surgery.

Role: Co-Investigator. Effort: 0.60 Calendar Months.

Ongoing Oncology Nursing Foundation (PI: Morrson, C).01/01/2019-12/31/2020. 2019 Research Grant. Self-Management Beaviors and Quality of Life in Adults Post Hematopoietic Stem Cell Transplant. Goals: To explore modifiable and non-modifiable factors that contribute to medication adherence in adults after having a hematopoietic stem cell transplant (HSCT). This will be accomplished by achieving the following aims: 1) determine clinically relevant demographic and treatment factors related to medication adherence rates, 2) determine the impact of post-transplant factors (i.e., symptoms, executive functioning, perceived stress, self-efficacy) on medication adherence rates, and 3) determine the impact of medication adherence rates on post-transplant patient outcomes of infection, health-related quality of life (HRQOL), and hospital readmission. Role: Co-Investigator.

Complete 1900748 (PI: Clark, A). 12/31/18-09/29/19. Ohio Department of Mental Health and Addiction Services. Ohio State Opiate Response SBIRT Training. âScreening, Brief Intervention, and Referral to Treatment Training Programâ. Goals: Provide training to support the interprofessional adoption and implementation of SBIRT in a variety of treatment settings. Utilizing an interprofessional train the trainer model, an evidenced based population-specific SBIRT training will be supplemented with original practice-specific case scenarios and motivational interviewing cases from the State of Ohio curriculum. Role: Statistical Support.

Complete P20 RR16481(PI: Cooper, N).05/01/04-04/30/19.NIH/NCRR. âKY-INBRE; Kentucky Network Biomedical Researchâ. Goals: This grant provides infrastructure support for bioinformatics and biostatistics.Role: Biostatistical Support to Regional Universities.

Complete P30GM110788 (PI: Ebersole, J). 08/15/14 â07/31/19. NIGMS. Center for Biologic Basis of Oral/Systematic Diseases (Phase III). The goal of this study is to investigate the contribution of chronic inflammation to oral and systemic. The CBBO/SD provides an infrastructure for development of the junior faculty by providing grants management support, educational opportunities, a biostatistics/bloinformatics core, and a clinical research center. Role: Assist in Statistical Support.

Complete UL1TR001998 (PI: Kern, P). 08/15/16-05/31/20. NCATS. Kentucky Center for Clinical and Translational Science. Goals: Transform the pace, effectiveness, and quality of translational research at UK which will result in better health for the people of mid-Appalachia. Role: BERD Faculty Member.

Complete PON2 500 1700000999.(PI: Stromberg, AJ).03/15/2017-06/30/18. Kentucky Justice and Public Safety Cabinet. Needs Assessment and Strategic Planning. Goals: Research and Analysis Services and Consultation for the Kentucky Justice and Public Safety Cabinet for Needs Assessment and Strategic Planning. Role: Statistical Research Coordinator.

Complete PON2 746 1600000805.(PI: Talbert, J). 07/01/16 06/30/18. KY Cabinet for Health and Family Services.$1,274,206. Research, Data Analytics, Measurement of Program Outcomes: 1115 Waiver The over-all research objectives identified as the focus for the scope of work are those articulated in the Triple Aim: 1) Better healthcare for individual Medicaid/KCHIP beneficiaries, 2) Improved healthcare for the population (Medicaid/KCHIP), 3) Financial accountability and value-based decision making for healthcare resources. Role: Assist in Building Machine Learning Models.

Complete PP-1609-25975(PI: Stromberg, AJ).03/01/2017-02/28/18. National Multiple Sclerosis Society. Identifying Gene or SNP based Interactions in Multiple Sclerosis Data sets. Goals: This grant provides staff and faculty support to look for Gene or SNP based statistical interactions in Multiple Sclerosis Data sets. Role: Implement Feasible Solution Algorithm and Data Processing.

Complete TC-1403-14049.(PI: Williams, M).01/01/15-12/31/17.PCORI. Project ACHIEVE: Achieving Patient-Centered Care and Optimized Health in Care Transition. Goal: To provide detailed, comprehensive guidance for the design, implementation and maintenance of transitional care strategies for hospital-to-postacute care that optimize patient and caregiver outcomes in varying healthcare contexts. Role: Statistical Research Coordinator.

SUBMITTED, SCORED, AND IN REVISION	**PI submissions**

Arter, S and Lambert, J. NIDA. R03. Secondary Analysis Exploring Interactions Influencing Outcomes of Prenatal Opioid Exposure in a Large Maternal and Infant Data Hub. 1st submission: 1st submission: **38 percentile**. To be Resubmitted July 2020.

Arter, S and Lambert, J. Ohio Department of Education Third Frontier Research Incentive. Secondary Analysis Exploring Interactions Influencing Infant Mortality in a Large Maternal and Infant Data Hub. Submitted November 2019.

Lambert, J and Chavan, N. NICHD. R03. Exploring Higher Order Statistical Interactions related to Outcomes in Safe Labor. 1st submission: **34 percentile**. Resubmitted November 2019.

Co-I, Statistical Support, and Mentor Submissions

Gillespie, G. R01. Stopping the Contagion of Toxic Bullying Behaviors against Newly Licensed Nurses. Role: Co-I. Submitted October 2019.

Smith, C and Gillespie, G. Multi-Component Intervention to Prevent Workplace Violence: A Feasibility Study. Role: Co-I. Submitted October 2019.

Bakas and Harnett. STTR. HiLois: A closed social network app for families to connect with and monitor cognitive function in older adults. Role: Co-I. Submitted and Not Funded.

Punches, B. K08. Decision-Making Factors for Therapeutic Opioid Use after Emergency Care. Role: Consultant. Submitted and Not Funded. 1st submission: **25 percentile**.

Stacy, K. F31. Development and Psychometric Testing of the Lewy Body Dementia Caregiver Activities Scale (LBD-CAS). Role: Mentor.

Jones, H. K01. Stress and Wellness Program for midlife Black women (B-SWELL). Role Mentor. Funded 2019.

SKILLS AND ABILITIES	Known Programming Languages: R(Expert), SAS(Proficient), Python(Proficient) , SQL(Beginner), JavaScript(Beginner), Visual Basic (Proficient), ADA(Proficient), and Tableau(Beginner).

Known Predictive Modeling Methods: Linear Models, Genearlized Linear Models, LASSO, Ridge Regression, Mixed Models, Principle Component Analysis, Partial Least Squares, Text Analysis, Bayesian Modeling, Classification and Regression Trees, Random Forests, Neural Networks, and many more.

Known Data Types: Claims Data, Electronic Medical Records (EMR), Genetic Data (VCF, BAM, BED), Text Data, GIS Data, and other types of Structured and Unstructured Data.