

Cole Brokamp

CONTACT INFORMATION

Division of Biostatistics and Epidemiology
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RESEARCH INTERESTS

Geoinformatics, Environmental and Population Health, Fairness in Precision Medicine

EDUCATION

Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio USA

Postdoctoral Research Fellow, Biostatistics & Epidemiology, 2016 – 2017

University of Cincinnati, Cincinnati, Ohio USA

Ph.D., Biostatistics and Bioinformatics, 2016

University of Cincinnati, Cincinnati, Ohio USA

B.S., Biomedical Engineering, 2010

ACADEMIC EXPERIENCE

Cincinnati Children's Hospital Medical Center
University of Cincinnati Department of Pediatrics
Division of Biostatistics & Epidemiology

Assistant Professor, 2017 - 2022

Associate Professor, 2022 - present

PUBLICATIONS

Milan N. Parikh, **Cole Brokamp**, Erika Rasnick, Lili Ding, Tesfaye B. Mersha, Katherine Bowers, Alonzo T. Folger. Epigenome-Wide Association of Neonatal Methylation and Trimester-Specific Prenatal PM2.5 Exposure. *Environmental Epidemiology*. In Press. 2022.

Shannon C. Conrey, Allison R. Burrell, **Cole Brokamp**, Rachel M. Burke, Sarah C. Couch, Liang Niu, Claire P. Mattison, Alexandra Piasecki, Daniel C. Payne, Mary A. Staat, Ardythe L. Morrow. Neighbourhood socio-economic environment predicts adiposity and obesity risk in children under two. *Pediatric Obesity*. Online. 2022.

Jordan Pennington, Erika Rasnick, Lisa J. Martin, Jocelyn M. Biagini, Tesfaye B. Mersha, Allison Parsons, Gurjit K. Khurana Hershey, Patrick Ryan, **Cole Brokamp**. Racial Fairness in Precision Medicine: Pediatric Asthma Prediction Algorithms. *American Journal of Health Promotion*. Online. 2022.

Esteban Correa, Lili Ding, Andrew F. Beck, **Cole Brokamp**, Mekibib Altayeb, Robert S. Kahn, Tesfaye Mersha. Understanding Racial Disparities in Childhood Asthma Using Individual- and Neighborhood-Level Risk Factors. *Journal of Allergy and Clinical Immunology*. In Press. 2022.

Stephen Trinidad, **Cole Brokamp**, Rashmi Sahay, Suzanne Moody, Dawne Gardner, Allison A. Parsons, Carley Riley, Nicole Sofer, Andrew F. Beck, Richard A. Falcone Jr., Meera Kotagal. Children from Disadvantaged Neighborhoods Experience Disproportionate Injury from Interpersonal Violence. *Journal of Pediatric Surgery*. Online. 2022.

Anita N. Shah, Erika Rasnick, Mohammad AN Bhuiyan, Chris Wolfe, Dianna Bosse, Jeffrey M. Simmons, Samir S. Shah, **Cole Brokamp**, Andrew F. Beck. Using Geomarkers and Sociodemographics to Inform Assessment of Caregiver Adversity and Resilience. *Hospital Pediatrics*. 12(8): 689-695. 2022.

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Stephen Trinidad, Andrew Vancil, **Cole Brokamp**, Suzanne Moody, Dawne Gardner, Allison A. Parsons, Carley Riley, Rashmi Sahay, Nicole Sofer, Andrew F. Beck, Richard A. Falcone Jr., Meera Kotagal. Relationships Between Socioeconomic Deprivation and Pediatric Firearm-Related Injury at the Neighborhood Level. *Journal of Trauma and Acute Care Surgery*. Online. 2022.

Kim Hartley, Patrick Ryan, Gordon Gillespie, Joseph Perazzo, J. Michael Wright, Glenn Rice, Geoffrey Donovan, Rebecca Gernes, Gurjit Khurana Hershey, Grace LeMasters, **Cole Brokamp**. Residential Greenness, Asthma, and Lung Function Among Children at High Risk of Allergic Sensitization: A Prospective Cohort Study. *Environmental Health*. In Press. 2022.

Madhumitaa Roy, **Cole Brokamp**, Sivaraman Balachandran. Clustering and Regression-Based Analysis of PM_{2.5} Sensitivity to Meteorology in Cincinnati, Ohio. *Atmosphere*. 13(4):545. 2022.

Joanna Thomson, Breann Butts, Saige Camara, Erika Rasnick, **Cole Brokamp**, Caroline Heyd, Rebecca Steuart, Scott Callahan, Stuart Taylor, Andrew Beck. Neighborhood Socioeconomic Deprivation and Health Care Utilization of Medically Complex Children. *Pediatrics*. e2021052592. 2022.

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Ashley Turner, **Cole Brokamp**, Chris Wolfe, Tiina Reponen, Patrick Ryan. Impact of Personal, Sub-hourly Exposure to Ultrafine Particles on Respiratory Health in Adolescents With Asthma. *Annals of the American Thoracic Society*. Online. 2022.

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Linnea Lowe, **Cole Brokamp**, Erika Rasnick, Eric S. Hall, Shauna Acquavita. A Geographic Perspective on Opioid Misuse: Substance Abuse Treatment Deserts in Southwestern Ohio. *Ohio Journal of Public Health*. 4(1). 2021.

Sarah de Loizaga, Lindsay Arthur, Bhawna Arya, Brian Beckman, Wubishet Belay, **Cole Brokamp**, Nak Hyun Choi, Sean Connolly, Soham Dasgupta, Tavenner Dibert, Marylou Dryer, Lakshmi Gokanapudy Hahn, Elizabeth Greene, Daphney Kernizan, Omar Khalid, Jennifer Klein, Ryan Kobayashi, Subhrajit Lahiri, Raymond Lorenzoni, Jennifer Marshall, Theodore Millette, Lily Moore,

Babu Muhamed, Meghna Murali, Andrea Otero Luna, Kinjal Parikh, Amy Sanyahumbi, Divya Shakti, Elizabeth Stein, Sanket Shah, Hannah Wilkins, McAllister Windom, Scott Wirth, Meghan Zimmerman, Andrew Beck, Nicholas Ollberding, Craig Sable, Andrea Beaton. Rheumatic Heart Disease in the United States: Forgotten but not Gone. Results of a 10 Year Multicenter Review. *Journal of the American Heart Association*. In Press. 2021.

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Emrah Gecili, Weiji Su, **Cole Brokamp**, Eleni-Rosalina Andrinopoulou, Francis J LaRosa Iii, Teresa Pestian, John P Clancy, George M Solomon, John J Brewington, Rhonda D Szczesniak. Rapid cystic fibrosis lung-function decline and in-vitro CFTR modulation. *Journal of Cystic Fibrosis*. S1569-1993(21)00111-9. 2021.

Grace Kelly, Jordan Pennington, Yonatan Segev, **Cole Brokamp**, Margaret N Jones, Saige Camara, Adrienne W Henize, Robert S Kahn, Andrew F Beck. Voter Participation is Associated with Child Health Outcomes at the Population Level. *Journal of Pediatrics*. In Press. 2021.

Mohammad Bhuiyan, Patrick Ryan, Farzan Oroumyeh, Yajna Jathan, Madhumitaa Roy, Siv Balachandran, **Cole Brokamp**. Source-specific contributions of particulate matter to asthma-related pediatric emergency department utilization. *Health Information Science and Systems*. 9(12). 2021.

Erika Rasnick, Patrick H. Ryan, A. John Bailer, Thomas Fisher, Patrick J. Parsons, Kimberly Yolton, Nicholas C. Newman, Bruce P. Lanphear, **Cole Brokamp**. Identifying Sensitive Windows of Airborne Lead Exposure Associated with Behavioral Outcomes at Age 12. *Environmental Epidemiology*. 5(2):e144. 2021.

Emrah Gecilia, Anushka Palipana **Cole Brokamp** Rui Huang, Eleni-Rosalina Andrinopoulou, Teresa Pestian, Erika Rasnick, Ruth H. Keogh, Yizhao, Ni, John P.Clancy, Patrick Ryan, Rhonda D. Szczesniak. Seasonality, mediation and comparison (SMAC) methods to identify influences on lung function decline. *MethodsX*. 8:101313. 2021.

Emrah Gecili, **Cole Brokamp**, Anushka Palipana, Rui Huang, Eleni-Rosalina Andrinopoulou, Teresa Pestian, Erika Rasnick, Ruth H.Keoghe, Yizhao Ni, John P.Clancy, Patrick Ryan, Rhonda D.Szczesniak. Seasonal variation of lung function in cystic fibrosis: longitudinal modeling to compare a Midwest US cohort to international populations. *Science of the Total Environment*. Online. 2020.

Patrick H. Ryan, **Cole Brokamp**, Jeff Blossom, Nathan Lothrop, Rachel L. Miller, Paloma I. Beamer, Cynthia M. Visness, Antonella Zanolletti, Howard Andrews, Leonard B. Bacharier, Tina Hartert, Christine C. Johnson, Dennis Ownby, Robert F. Lemanske, Jr., Heike Gibson, Weeberb Requia, Brent Coull, Edward M. Zoratti, Anne L. Wright, Fernando D. Martinez, Christine M. Seroogy, James E. Gern, Diane R. Gold, on behalf of the CREW Consortium. A Distributed Geospatial Approach to Describe Community Characteristics for Multi-Site Studies. *Journal of Clinical and Translational Science*. 5:e86, 1-8. 2021.

Christopher Wolfe, Teresa Pestian, Emrah Gecili, Weiji Su, Ruth H. Keogh, John P. Pestian, Michael Seid, Peter J. Diggle, Assem Ziady, John P. Clancy, Daniel H. Grosseohme, Rhonda D. Szczesniak, **Cole Brokamp**. Cystic Fibrosis Point of Personalized Detection (CFPOPD): An Interactive Web Application. *JMIR Med Inform*. 8(12):e23530. 2020.

Kim Hartley, Joseph Perazzo, **Cole Brokamp**, Gordon Lee Gillespie, Kim M. Cecil, Grace LeMas-

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Todd Florin, Lilliam Ambroggio, **Cole Brokamp**, Yin Zhang, Mantosh Rattan, Eric Crotty, Michael A Belsky, Sara Krueger, Thomas N Epperson, Andrea Kachelmeyer, Richard Ruddy, Samir S Shaw. Biomarkers and Disease Severity in Children with Community-Acquired Pneumonia. *Pediatrics*. Online. 2020.

Rhonda Szczesniak, Jessica L. Rice, **Cole Brokamp**, Patrick Ryan, Teresa Pestian, Yizhao Ni, Eleni-Rosalina Andrinopoulou, Ruth H. Keogh, Emrah Gecili, Rui Huang, John P. Clancy, Joseph M. Collaco. Influences of Environmental Exposures On Individuals Living with Cystic Fibrosis. *Expert Review of Respiratory Medicine*. Online. 2020.

Zana Percy, **Cole Brokamp**, Jennifer M McAllister, Patrick Ryan, Scott L Wexelblatt, Eric Hall. Subclinical and Overt Newborn Opioid Exposure: Prevalence and First Year Healthcare Utilization. *Journal of Pediatrics*. Online. 2020.

Sharad Wadhwani, John Bucuvalas, **Cole Brokamp**, Ravinder Anand, Ashutosh Gupta, Stuart Taylor, Eyal Shemesh, Andrew Beck. Association Between Neighborhood-level Socioeconomic Deprivation and the Medication Level Variability Index for Children Following Liver Transplantation. *Transplantation*. Online. 2020.

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Sarah Orkin, **Cole Brokamp**, Toshifumi Yodoshi, Andrew T. Trout, Chunyan Liu, Syeda Meryum, Stuart Taylor, Christopher Wolfe, Rachel Sheridan, Aradhna Seth, Mohammad Alfrad Nobel Bhuiyan, Sanita Ley, Ana Catalina Arce-Clachar, Kristin Bramlage, Robert Kahn, Stavra Xanthakos, Andrew F. Beck, Marialena Mouzaki. Community Socioeconomic Deprivation and Non-Alcoholic Fatty Liver Disease Severity. *Journal of Pediatric Gastroenterology and Nutrition*. . 2019.

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Rhonda D. Szczesniak, **Cole Brokamp**, Weiji Su, Gary L. McPhail, John Pestian, and John P. Clancy. Improving Detection of Rapid Cystic Fibrosis Disease Progression—Early Translation of a Predictive Algorithm into a Point-of-Care Tool. *IEEE Journal of Translational Engineering in Health and Medicine*. 7(1); 1-8. 2019. [Download](#).

Lauren C. Riney, **Cole Brokamp**, Andrew F. Beck, Wendy Pomerantz, Hamilton Schwartz, Todd A. Florin. Emergency Medical Services Utilization is Associated with Community Deprivation in Children. *Prehospital Emergency Care*. Online. 2018. [Download](#).

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Andrew F. Beck, Carley L. Riley, Stuart Taylor, **Cole Brokamp**, Robert S. Kahn. Toward a Culture of Health in Hospitals: Pervasive population disparities in inpatient bed-day rates across conditions and subspecialties. *Health Affairs*. 37(4); 551-559. 2018. [Download](#).

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Rhonda Szczesniak, **Cole Brokamp**, Weiji Su, Gary L. McPhail, John Pestian, John P. Clancy. Early Detection of Rapid Cystic Fibrosis Disease Progression Tailored to Point of Care: A Proof-of-Principle Study. *Healthcare Innovations and Point of Care Technologies*. (HI-POCT), 2017 IEEE;

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Cole Brokamp, Chris Wolfe, Todd Lingren, John Harley, Patrick Ryan. Decentralized and Reproducible Geocoding and Characterization of Community and Environmental Exposures for Multi-Site Studies. *Journal of American Medical Informatics Association.* 25(3); 309-314. 2017. [Download](#).

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Todd Florin, Lilliam Ambroggio, **Cole Brokamp**, Mantosh S. Rattan, Eric J. Crotty, Andrea Kachelmeyer, Richard M. Ruddy, Samir Shah. Reliability of Examination Findings in Suspected Community-Acquired Pneumonia. *Pediatrics.* 140(3); e20170310. 2017. [Download](#).

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Jennifer Kannan, **Cole Brokamp**, David I. Bernstein, Grace K. LeMasters, Gurjit K. Khurana Hershey, Manuel Villareal, James E. Lockey, Patrick Ryan. Parental Snoring and Environmental Pollutants, but Not Aeroallergen Sensitization, Are Associated with Childhood Snoring in a Birth Cohort. *Pediatric Allergy, Immunology, and Pulmonology.* . 2016. [Download](#).

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Sheryl E Koch, Xiaoqian Gao, Lauren Haar, Min Jiang, Valerie M Lasko, Nathan Robbins, Wenfeng Cai, **Cole Brokamp**, Priyanka Varma, Michael Tranter, Yong Liu, Xiaoping Ren, John N. Lorenz, Hong-Sheng Wang, W Keith Jones, Jack Rubinstein. Probenecid: novel use as a non-injurious positive inotrope acting via cardiac TRPV2 stimulation. *Journal of Molecular and Cellular Cardiology*. 53(1); 134-144. 2012. [Download](#).

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PATENTS

Assem Ziady, Rhonda Szczesniak, John Clancy, **Cole Brokamp**, inventors; Cincinnati Children's Hospital Medical Center, assignee. Compositions and methods for treatment of lung function. United States patent US 10,761,099. 2020 Sep 1.

TALKS

Automating Your Academic CV, Biosketch, and Website with R. *CCHMC R Users Group Meeting*. Cincinnati, OH. 2022. [Download](#).

Decentralized Geomarker Assessment for Multi-Site Studies. *Pediatric Academic Societies Annual Meeting*. Denver, CO. 2022.

Decentralized Geomarker Assessment for Multi-Site Studies. *Rare Diseases Clinical Research Network (RDCRN) Steering Committee Meeting*. Online. 2022. [Download](#).

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Challenges and Solutions for Private and Reproducible Environmental Exposure Assessment at Scale. *NIH Ethical, Legal, and Social Implications of Gene-Environment Interaction Research Workshop*. Online. 2022. [Download](#).

Geoinformatics for Population Health. *University of Cincinnati Introduction to Medical Informatics course guest lecture*. Cincinnati, OH. 2021. [Download](#).

Efficient and Secure High Resolution Spatiotemporal Exposure Assessment. *International Society of Exposure Science Annual Meeting*. Online. 2021.

Decentralized, Efficient, and Secure High Resolution Spatiotemporal Exposure Assessment at Scale. *NIH Integrating Multiscale Geospatial Environmental Data into Large Population Health Studies Workshop*. Online. 2021. [Download](#).

Decentralized and Reproducible Geocoding and Geomarker Assessment for Multi-Site Studies. *Pediatric Acute Care Cardiology Collaborative Spring Conference*. Online. 2021. [Download](#).

Geomarkers and Health. *Rutgers University Social Epidemiology guest lecture*. Online. 2021. [Download](#).

Decentralized and Reproducible Geocoding and Characterization of Community and Environmental Exposures at Scale. *University of Cincinnati Biomedical Informatics Practicum (BMIN8001) guest lecture*. Cincinnati, OH. 2021. [Download](#).

Three Levels of Computational Mobility in R. *SatRday Columbus*. Virtual. 2020. [Download](#).

Decentralized and Reproducible Geocoding and Characterization of Community and Environmental Exposures at Scale. *Pediatric Musculoskeletal & Rheumatology Innovation Core Center Seminar Series*. Virtual. 2020. [Download](#).

Introduction to Geoinformatics for Precision Population Health. *University of Cincinnati Introduction to Medical Informatics course guest lecture*. Cincinnati, OH. 2020. [Download](#).

Short-term Ambient Fine Particulate Matter and Anxiety Symptoms in Adolescents with Generalized Anxiety Disorder. *International Society of Environmental Epidemiology Annual Meeting*. Virtual. 2020.

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Pediatric Psychiatric Emergency Department Utilization and Fine Particulate Matter: A Case-Crossover Study. *University of Cincinnati Department of Epidemiology Seminar*. Cincinnati, OH. 2020. [Download](#).

Using Twitter for Academic Networking. *Cincinnati Children's Faculty Career Development Seminar Series*. Cincinnati, OH. 2019. [Download](#).

Causal Inference Machine Learning Methods for Identifying Subpopulations Susceptible to the Health Effects of Air Pollution. *Cincinnati Children's Machine Learning Focus Group*. Cincinnati, OH. 2019. [Download](#).

Non-Parametric and Data-Driven Methods for Identifying Subpopulations Susceptible to the Health Effects of Air Pollution. *International Biometric Society (Eastern North American Region) Spring Meeting*. Philadelphia, PA. 2019. [Download](#).

Decentralized and Reproducible Geocoding and Characterization of Community and

Environmental Exposures at Scale. *Center for Clinical & Translational Science & Training Grand Rounds.* Cincinnati, OH. 2019. [Download](#).

Decentralized and Reproducible Geocoding and Characterization of Community and Environmental Exposures at Scale. *Northwestern Institute for Public Health and Medicine Seminar Series.* Chicago, IL. 2018.

Introduction to Geoinformatics for Precision Population Health. *University of Cincinnati Introduction to Medical Informatics course guest lecture.* Cincinnati, OH. 2018. [Download](#).

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Climate Change and Health Disparities in the Urban Environment. *University of Cincinnati Research and Innovation Week.* Cincinnati, OH. 2018.

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Hot Topics in Pediatric Research Methodology: CART and Random Forest. *Pediatric Academic Society Annual Meeting.* Toronto, ON. 2018.

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Combined Sewer Overflow Events and Childhood Emergency Department Visits: A Case-Crossover Study. *University of Cincinnati Environmental Health Seminar.* Cincinnati, OH. 2017. [Download](#).

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Using GRAPPH to Leverage Geoinformatics for Innovative Research, Place-based Clinical Care, and Community-Centered Quality Improvement. *Cincinnati Children's Hospital Medical Center Mayerson Center for Safe and Healthy Children Quarterly Research Meeting.* Cincinnati, OH. 2017. [Download](#).

Combined Sewer Overflow Events and Childhood Emergency Department Visits: A Case-Crossover Study. *Cincinnati Children's Hospital Medical Center Postdoc and Research Associate Meeting.* Cincinnati, OH. 2017. [Download](#).

Geocoding to Characterize Community and Environmental Exposures for Multi-site Studies. *Cincinnati Children's Hospital Medical Center Division of Biomedical Informatics Hutton Lecture Series.* Cincinnati, OH. 2017. [Download](#).

GIS Tools for Environmental Epidemiology. *University of Cincinnati Biomedical Informatics (BMIN8001) Practicum course guest lecture.* Cincinnati, OH. 2017. [Download](#).

Building A Platform for Data Sharing. *Cincinnati Children's Hospital Medical Center Academy Health Site Visit.* Cincinnati, OH. 2017. [Download](#).

Land Use Models for Elemental Components of Particulate Matter in an Urban Environment: A Comparison of Regression and Random Forest Models. *International Society of Exposure Science Annual Meeting.* Utrecht, NL. 2016. [Download](#).

Predictive Comparisons: Interpreting Input Effects for Any Supervised Learner. *Cincinnati Children's Hospital Medical Center Division of Biostatistics & Epidemiology Journal Club.* Cincinnati, OH. 2016. [Download](#).

Land Use Models for Elemental Components of Particulate Matter in an Urban Environment: A Comparison of Regression and Random Forest Models. *University of Cincinnati Division of Biostatistics and Bioinformatics Seminar Series.* Cincinnati, OH. 2016. [Download](#).

Data Visualization for Population Health Initiatives. *All In Data Visualization Webinar.* Cincinnati, OH. 2016. [Download](#).

Using Machine Learning and Interactive Dashboards to Understand How Children's Health is Impacted by their Community and Surrounding Environment. *University of Cincinnati Institute for Analytics Innovation Showcase and Networking Event.* Cincinnati, OH. 2016. [Download](#).

Combined Sewer Overflow and Childhood Hospital Admissions. *Cincinnati Children's Hospital Medical Center Division of Biostatistics & Epidemiology Seminar Series.* Cincinnati, OH. 2016. [Download](#).

Land Use Random Forests for Estimation of Exposure to Elemental Components of Particulate Matter. *University of Cincinnati Division of Biostatistics and Bioinformatics Doctoral Dissertation Defense.* Cincinnati, OH. 2016. [Download](#).

Geospatial Data for Environmental Epidemiology. *Cincinnati Children's Hospital Medical Center Environmental Epidemiology Shared Interest Group Seminar Series.* Cincinnati, OH. 2016. [Download](#).

Confidence Intervals for Random Forest Predictions Using the Infinitesimal Jackknife. *University of Cincinnati Division of Biostatistics and Bioinformatics Seminar Series.* Cincinnati, OH. 2015. [Download](#).

Childhood Residential Changes are Associated with Decreased Traffic Exposure and Improved Neighborhood Characteristics. *International Society of Exposure Science Annual Meeting.* Las Vegas, NV. 2015. [Download](#).

R Studio and R Markdown: An integrated IDE and report generator for R. *University of Cincinnati BE7022 (Intro To Biostatistics) Guest Lecture.* Cincinnati, OH. 2015. [Download](#).

Does the Elemental Composition of Indoor and Outdoor PM2.5 Accurately Represent the Elemental Composition of Personal PM2.5?. *University of Cincinnati Division of Epidemiology Seminar Series.* Cincinnati, OH. 2014.

Assessing Personal PM2.5 Exposure Prediction Improvement After Addition of Indoor PM2.5 Exposure and Personal Characteristics to Outdoor PM2.5 Exposure Measurements. *Joint Statistical Meeting.* Boston, MA. 2014.

Exact Sampling and Counting for Fixed-Margin Matrices. *University of Cincinnati Division of Epidemiology Seminar Series.* Cincinnati, OH. 2013.

Small Molecule Disruption of G Beta Gamma Signaling Inhibits the Progression of Heart Failure. *University of Cincinnati Department of Pharmacology and Biophysics Seminar Series.* Cincinnati, OH. 2011.

Ultrasound-Targeted Microbubble Destruction to Deliver Nucleic Acid to the Heart. *University of Cincinnati Department of Pharmacology and Biophysics Seminar Series.* Cincinnati, OH. 2011.

An academic research cooperative education experience. *University of Cincinnati BME321 Guest Lecture.* Cincinnati, OH. 2011.

AWARDS AND MEMBERSHIPS

CCHMC Division of Biostatistics & Epidemiology Top Publication	2020
CCHMC Division of Biostatistics & Epidemiology Top Research Achievement	2020
CCHMC Division of Biostatistics & Epidemiology Top Research Achievement	2017
CCHMC Division of Biostatistics & Epidemiology Top Publication	2017
CCHMC Division of Biostatistics & Epidemiology Travel Award	2016
CCHMC Arnold W. Strauss Fellowship Award	2016
Member - International Society of Exposure Science	2014 – present
Member - International Society of Environmental Epidemiology	2017 – present
Choose Ohio First Scholarship Recipient	2010 – 2015
University Graduate Scholarship Recipient	2010 – 2016
Distinguished Honors Scholar, UC Engineering	2010
University of Cincinnati Alumni Scholarship	2008 – 2009
University Cincinnati Scholar Recipient	2005 – 2010

LEADERSHIP AND SERVICE

Member of Artificial Intelligence Governance Council, CCHMC	2022
Chair of the “Harnessing Big Data in Exposure Science” Session, International Society of Exposure Science Annual Meeting	2021
Chair of the “Environmental Exposures and Mental Health” Session, International Society of Environmental Epidemiology Annual Meeting	2021
Founder and leader of CCHMC R Users Group	2020 – 2021
Member of Divisional Faculty Career Development Committee, CCHMC	2019 – 2022
Member of Divisional Strategic Plan Steering Committee, CCHMC	2017 – 2022

Member of Divisional Research Committee, CCHMC	2017 – 2020
Chair of the “Ensemble Learning for Air Pollution Exposure Assessment” Session, International Society of Exposure Science Annual Meeting	2017
Chair of the “Land Use Regression Modeling” Session, International Society of Exposure Science Annual Meeting	2016
Co-founded Biostatistics Student Journal Club, Department of Environmental Health, University of Cincinnati	2013
Student Representative to Graduate Education Committee, Department of Pharmacology, University of Cincinnati	2010 – 2011
Journal Reviewer for:	
Academic Pediatrics	
American Journal of Respiratory and Critical Care Medicine	
Annals of Epidemiology	
Environment International	
Environmental Health Perspectives	
Environmental Modeling & Assessment	
Environmental Pollution	
Environmental Research	
Environmental Science & Technology	
Environmental Science & Technology Letters	
Health & Place	
International Journal of Environmental Research and Public Health	
International Journal of Epidemiology	
Journal of Exposure Science and Environmental Epidemiology	
Journal of Open Source Software	
PLOS ONE	
Pediatrics	
Science of the Total Environment	
Stochastic Environmental Research and Risk Assessment	
Grant Reviewer for:	
NIH ZES1 LKB-S (KS) Special Emphasis Panel	March 2022
NIH ZES1 LWJ-S (K9) Special Emphasis Panel	March 2022
University of Louisville CIEHS Pilot Project Program	2021
University of Michigan M-LEEaD Center Pilot Projects	2020
Ohio State University CCTS Pilot Projects	2020
NIH SIEE Study Section, Early Career Reviewer	October 2019
Arnold S. Strauss Fellowship Award, Cincinnati Children’s	2018 – 2021
University of Rochester Processes and Methods Grant	2018 – 2020, 2022
Ohio State University CCTS Pilot Translational & Clinical Studies Program	2020
Puerto Rico Science, Technology & Research Trust	2017
Abstract Reviewer for:	
American Medical Informatics Association Clinical Informatics Conference	2021
International Society of Exposure Science Annual Meeting	2018, 2019, 2022
International Society of Environmental Epidemiology Annual Meeting	2018, 2020, 2022

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