

Cici X.C. Bauer, PhD, MS

Associate Professor

James W. Rockwell Professorship in Public Health (Preventive Medicine and Epidemiology)

Department of Biostatistics and Data Science

Director, Center for Spatial-temporal Modeling for Applications in Population Sciences (CSMAPS)

University of Texas Health Science Center in Houston (UTHealth) School of Public Health

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Contact Information

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RESEARCH EXPERTISE/INTERESTS

Bayesian spatial-temporal modeling; Dynamic prediction modeling; Hierarchical models for complex survey data; Bayesian small area estimation; Statistical analysis of data from wearable devices; Social determinants of health; Health disparity and inequality

EDUCATION

Ph.D. in Statistics, University of Washington Seattle, August 2012

- Dissertation: *Bayesian Modeling of Health Data in Space and Time*

- Advisor: Dr. Jon Wakefield

- Committee: Drs. Vladimir Mini, Steve Self, Peter Guttorp and Paul Sampson

Professional Appointments

Founding Director 01/2023 – Present

Center for Spatial-temporal Modeling for Applications in Population Sciences (CSMAPS)

School of Public Health, University of Texas Health Science Center at Houston

Associate Professor (Tenured) 09/2022 – Present

Department of Biostatistics and Data Science

School of Public Health, University of Texas Health Science Center at Houston (UTHealth)

Co-Founder & Co-Director 01/2022 – Present

Joint Center on Geospatial Analysis & Health (JCoGA&H)

UTHealth-MD Anderson Population Health Initiative

Affiliate Member 04/2021 – Present

National Cancer Prevention and Control Research Network (CPCRN)

Faculty Affiliate 02/2022 – Present

Coordinating Center for Clinical Trials

Department of Biostatistics and Data Science

School of Public Health, University of Texas Health Science Center at Houston

Faculty Affiliate 06/2019 – Present

Center for Health Promotion and Prevention Research

School of Public Health, University of Texas Health Science Center at Houston

Assistant Professor (Tenure Track) Department of Biostatistics and Data Science School of Public Health, University of Texas Health Science Center at Houston	08/2018 – 09/2022
Associate Director of Statistics Early Clinical Development Research, Pfizer Inc., Cambridge, MA	09/2016 – 08/2018
Assistant Professor (Tenure Track) Department of Biostatistics, Brown University	09/2012 – 09/2016
Faculty Affiliate Spatial Structures for the Social Sciences (S4), Brown University	09/2012 – 09/2016
Fellow Institute at Brown for the Study of Environment and Society (IBES) Brown University	05/2015 – 09/2016
Core Faculty Biostatistics core, Hasbro Children’s Hospital, Providence, Rhode Island	09/2013 – 09/2016
Research Assistant Statistical Center for HIV/AIDS Research & Prevention (SCHARP), Fred Hutchinson Cancer Research Center, Seattle, Washington	01/2010 – 08/2012
Research Assistant Department of Biostatistics, University of Washington Seattle	01/2008 – 12/2009
Biometrician II Alaska Department of Fish and Game Wildlife Conservation, Fairbanks, Alaska	08/2005 – 06/2007

RESEARCH GRANTS AND CONTRACTS

ACTIVE

- CPRIT RP230036** 03/01/2023-02/28/2028
Geospatial Approaches to Melanoma Early Detection – The GAMED Project
 Role: **Co-PI (Nelson, MD Anderson/Bauer, UTHealth)**
 In this project we aim to use data-driven approach to creating statistical models that predict which areas may have the most late-stage melanomas in the future, and identifying the multi-level factors associated with the late-stage melanoma diagnosis in Texas. We then plan to identify PCPs in high melanoma burden areas who are interested in learning about skin cancer, and deploy our multimodal educational intervention program, tailored to the social and community patient context, to clinical sites in those communities.
 Total amount: \$1,998,196
- NIH U01TR004355** 10/31/2022–9/30/2024
Addressing COVID-19 Testing Disparities in Vulnerable Populations Using a Community JITAI (Just in Time Adaptive Intervention) Approach: RADxUP Phase III
 In this project we focus on understanding factors associated with rapid SARS-CoV-2 testing through a mixed methods study (Aim 2a) and adapt our intervention messages, materials and strategies to increase relevance, intensity, and reach. We also include a broader focus on addressing the social determinants of health (SDOH) experienced by our communities and a greater focus on combating misinformation. Because the communities in which we are working are particularly

vulnerable, and in need of many other services, broadening the topics on which outreach and education topics are covered.

Role: **MPI (Fernandez/McPherson/Reininger/Fujimoto/McGaha/Bauer)**

Total amount: \$2,179,847

- **NIDILRR** 9/1/2022–8/31/2027
TIRR Memorial Hermann/Baylor College of Medicine/UT Health Collaborative TBI Model System
PI: Sander/Juengst, TIRR Memorial Hermann Research Center
Role: **Subcontract-PI**
- **NIH R01DA054267-01A1** 5/15/2022–3/31/2027
Predict to Prevent: Dynamic Spatiotemporal Analyses of Opioid Overdose to Guide Pre-emptive Public Health Responses
Role: **MPI (Stopka, Tufts/Bauer, UTHealth)**
This project proposes to use a statewide Public Health Data Warehouse with a large number of linked administrative datasets to identify current opioid overdose patterns, predict future opioid overdose epidemics, and evaluate the effectiveness of public health and clinical interventions.
Total amount: \$3,446,178
Project website:
<https://spatiotemporal-data-science.shinyapps.io/PredictToPrevent/>
- **UTH-MDA Population Health Initiative Collaborative Projects**
IMPACT FUND – Core Resources 1/1/2022–12/31/2023
Joint Center on Geospatial Analysis and Health
Role: **MPI (Bauer/Ramphul/Strong/Walsh)** (No FTE for PIs)
The Joint Center on Geospatial Analysis & Health (JCoGA&H) is a collaboration between The University of Texas Health Science Center at Houston – School of Public Health (UTHealth) and The University of Texas MD Anderson Cancer Center (MD Anderson), to conduct and deploy focused geospatial analysis to: build consensus on shared strategic impact priorities in population health and health equity; enhance access to spatial analysis essential to research, policy analysis, and public health practice; and directly enable researchers, public health practitioners, and community-based organizations in Greater Houston and across the state of Texas to utilize spatial analysis to improve and inform their work in population health.
Total amount: \$200,000
Project website: <https://sph.uth.edu/projects/jcogah/>
- **Cameron County Public Health Department (CCPH)** 3/1/2022–5/30/2024
COVID-19 Data Analytics
Role: **MPI (Bauer/Lee)**
This project aims to conduct sophisticated spatial-temporal analysis to provide insight into the temporal trends, spatial trends, and disparities in COVID-19 infection, fatality, testing, and vaccination by age, gender, ethnicity and location for CCPH.
Total amount: \$225,000

- **NIH UL1TR003167-03S3** 9/17/2021–8/31/2023
Addressing COVID-19 Testing Disparities in Vulnerable Populations Using a Community JITAI (Just in Time Adaptive Intervention) Approach – RADxUP Phase II
 MPI: Fernandez/McPherson/Fujimoto/McGaha/de Oliveira Otto/Reininger
 Role: Co-Investigator
 This study will leverage long-standing academic-community partnerships to examine COVID-19 infection, testing, and vaccination patterns in three Texas regions (Houston/Harris County, South Texas, and Northeast Texas) to identify underserved communities. In these communities, we will provide and evaluate a multilevel intervention to increase reach, uptake, implementation, and sustainment of SARS-CoV-2 testing and COVID-19 vaccination. We will also explore the impact and reach of people’s communication networks on attitudes, intentions, and decisions on behavior regarding SARS-CoV-2 testing and COVID-19 vaccination.
 Total amount: \$796,433

- **FORE Opioid Crisis Innovation Challenge 2021** 2/2022–1/2024
Syndromic Surveillance of the Opioid Crisis in Lowell, Massachusetts: Data to Action and Evaluation
 PI: Shrestha/Pustz/Stopka, Tufts University
 Role: **Subcontract-PI**
 Total amount: \$300,000

- **NIH/NHLBI R21HL165369-01** 7/1/2022–6/30/2024
Studying 24-hour rhythms of light exposure, alignment with rest-activity cycle, and cardiometabolic health in a nationally representative sample
 MPI: Xiao, UTHealth and Figueiro, RPI
 Role: Co-Investigator
 Total amount: \$275,000

- **UT Austin/MD Anderson Cancer Center Collaborative Pilot Project Grant** 2/15/2022–2/14/2023
Texas Melanoma Stage at Diagnosis and Geospatial Persistent Poverty
 PI: Adamson (UT Austin)/Nelson (MD Anderson)
 Role: Co-Investigator (In kind)
 Total amount: \$50,000

- **Health Resources & Services Administration (HRSA)** 11/2021–11/2023
Community-Based Workforce Development and Mobilization to Increase COVID-19 Vaccination Equity in Texas
 The goals are to address personal and community factors influencing vaccination decisions, and increase access to vaccination. Throughout the performance period, we will continuously monitor our efforts to provide information for rapid-cycle improvements to increase program reach and effectiveness.
 PI: Fernandez, UTSPH
 Role: Co-Investigator (**Co-leads the data coordinating and analytics core**)
 Total amount: \$10,000,000

- **Texas DSHS/CDC** 10/1/2021–5/31/2023
Texas SARS-CoV-2 Variant Sequencing Network
 This state-wide project will create a networked partnership between DSHS, academic, commercial, and public health laboratories for high throughput SARS-CoV-2 sequencing and analysis for Texas, to enable an efficient and comprehensive approach to identify the presence of known variants of interest (VOI) and variants of concern (VOC) and will provide the capability to identify new variants as they emerge.
 PI: Boerwinkle, UTHealth
 Role: Co-Investigator (**Co-leads the data coordinating and analytical core**)
 Total amount: \$15,000,000
- **Valley Baptist Legacy Foundation** 03/2021–03/2024
Support for the Establishment of a Public Health Laboratory and an Integrated Health Data Management System for the Cameron County and Major Municipalities
 PI: Fisher-Hoch, UTHealth
 Role: Biostatistician
 Total amount: \$750,000
- **NIH 3UL1TR003167-02S10** 9/1/2020–8/31/2022
RADx: Understanding and Addressing COVID-19 Testing Disparities in Vulnerable Populations: A Multilevel and Multi-method Approach: RADxUP Phase I
 Building on the partnerships and resources of the Center for Clinical and Translational Science (CCTS), the goal of the study is to partner with our community and stakeholder colleagues to identify dynamic disease hotspots and testing deserts in racially diverse neighborhoods of the target regions, and to use that information to inform the rapid adaptation and deployment of multilevel level just-in-time adaptive intervention strategies to reach vulnerable populations.
 MPI: Fernandez/McPherson/Reininger/de Oliveira Otto, UTHealth
 Role: Co-Investigator
 Total amount: \$4,998,788
- **National Aeronautics & Space Administration (NASA)** 01/2021–01/2025
80NSSC21K0510
Apply NASA's Earth Observation Product to Improve Artificial Light at Night (ALAN) Mapping and Public Health Surveillance
 PI: Xiao, UTHealth
 Role: Co-Investigator/Statistical Lead
 Total amount: \$497,301
 Project website:
<https://spatiotemporal-data-science.shinyapps.io/ALAN/>
- **National Aeronautics & Space Administration (NASA)** 09/2021–02/2023
Tiger Team Award, Satellite Data for Environmental Justice (SD4EJ)
 The aims of this study are to develop a central warehouse for long-term satellite data on multiple environmental exposures and hold regular teleconferences with EJ stakeholders to enhance their ability to map EJ for various environmental exposures and produce new understanding of which communities may experience benefits from governmental initiatives.

PI: Anenberg, GWU/Xiao, UTHealth
Role: Co-Investigator/Statistical Lead
Total amount: \$179,527

- **NIH R01CA228527** 12/2018–11/2023
Development and Validation of a Measure of Organizational Readiness (motivation × capacity) for Implementation
This project seeks to develop a measure of organizational readiness for delivering evidence-based interventions to improve colorectal cancer screening among community health center patients.
PI: Fernandez ME, UTHealth
Role: Co-Investigator
Total amount: \$2,858,386

COMPLETED

- **NIH Consortium for Cancer Implementation Science (CCIS)** 10/2021–10/2022
Developing Geospatial Data Visualizations for Cancer Screening Inequality and Contextual Factors
This project aims to develop a public-facing data visualization dashboard to inform understanding of geographical variation of cancer screening inequality and its relation to social determinants of health and social vulnerability.
Role: **Principal Investigator**
Total amount: \$20,000 (individual award)
Developed R Shiny dashboard:
<https://spatiotemporal-data-science.shinyapps.io/CancerScreening-SDOH/>
- **CDC 6U48DP006408-01-01** 5/11/2021– 5/10/2022
Connecting Behavioral Science to COVID-19 Vaccine Demand (CBS-CVD) network
University of Texas Prevention Research Center COVID-19 Supplement. The goal of this one-year supplement is to increase COVID-19 vaccine confidence in selected regions in Texas.
MPI: Fernandez/Cuccaro, UTHealth
Role: Co-Investigator
Total amount: \$396,825
- **Cancer Prevention and Research Institute of Texas** 12/2016–05/2022
CPRIT RP170493
For Our Children: A Tailored Multi-level Intervention for Parents and Healthcare Providers to Increase HPV Vaccination Rates.
The study aims to improve vaccination rates among Hispanic adolescents (aged 11-17). Group randomized trial of a multi-level intervention using a tailored interactive multimedia intervention (TIMI) for parents, parental text messaging, and healthcare providers training through an interactive app.
PI: Fernandez ME, UTHealth
Role: Biostatistician (contributed time 04/2021–05/2022)
Total amount: \$1,413,306

- **Episcopal Health Foundation** 10/2021–03/2022
Evaluation of a Collaborative Program Between an Affordable Housing Provider and a Managed Care Organization
 PI: Tasi, UTHealth
 Role: Co-Investigator
 Total amount: \$95,732

- **Fort Bend County** 11/2020–11/2021
Fort Bend County COVID Analytics
 The goal of this project is to understand person, place, time, disparities and trends to inform public health action and policy including vaccine distribution in Fort Bend County (FBC).
 PI: de Oliveira Otto, UTHealth
 Role: Co-Investigator
 Total amount: \$122,757

- **University of Texas College of Pharmacy** 03/2020–08/2020
Integrated Opioid Response Team Training Program
 This project provides study design and analytical expertise for the development of an integrated emergency response program for opioids and other drug-related disorders.
 PI: Langabeer, UTHealth
 Role: Biostatistician
 Total amount: \$1,500,000

- **Texas Department of State Health Services (DSHS)** 01/2020–12/2020
Rider 29 - Cost Analysis of Outbreaks Involving Certain Vaccine-preventable Diseases
 This project studies and assesses the direct and indirect economic costs incurred by DSHS and local public health organizations in responding to vaccine-preventable disease outbreaks
 PI: Sonawane, UTHealth
 Role: Co-Investigator
 Total amount: \$140,000

- **Massachusetts Department of Public Health (MDPH)** 01/2019–12/2019
High-risk Opioid Prescribers and Overdose in MA: a Mixed Methods Approach
 This project aims to conduct spatial and statistical analyses by employing a mixed methods “prescriber-centered” approach to assess opioid prescribing rates and associations with fatal and non-fatal opioid overdoses in communities across the state of Massachusetts. PI: Stopka, Tufts University
 Role: Statistics consultant
 Total amount: \$150,000

- **NIH/NCI R01CA095994** 2014–2018
Spatio-temporal Epidemiology: Methods and Applications
 This project proposes new statistical methodology development methods for the prediction of space-time health data.
 PI: Wakefield, University of Washington Seattle

Role: **subcontract-PI** (ended in 2016 due to job change)
Total amount: \$1,622,394

- **NIH/NINDS R01NS064901** 2014–2017
EFECAB: Improving Pig Management to Prevent Epilepsy in Burkina Faso
PI: Carabin H, University of Oklahoma Health Sciences Center
Role: Statistics consultant
Total amount: \$2,294,999
- **NIH/NIAID R21AI119773** 2015–2017
Spatial-temporal Modeling for Surveillance Data of Multiple Pathogens
This project proposes new statistical methods for analyzing infectious disease surveillance data to address the challenges of multiple transmission routes, multiple co-circulating pathogen types and complex system of immunity, cross-immunity and unobserved asymptomatic infections.
PI: Yang, University of Florida
Role: **subcontract-PI** (ended in 2016 due to job change)
Total amount: \$435,990
- **CFAR Developmental Grant** 2015–2016
The Spatial Pattern of HIV Treatment Cascade from Home-based Counseling and Testing in Western Kenya
The project investigates the spatial patterns of linkage to and retention in HIV care from home-based counseling and testing (HBCT) program in Western Kenya.
Role: **Principal Investigator**
Total amount: \$40,000
- **NIH/NICHHD R21HD078762** 2014–2016
Investigating and Extending Bayesian Methods for Small Area Estimation
This project evaluates the performance of Bayesian models for small area estimation with a particular focus on their performance with population data of the type provided by the census.
PI: Logan, Brown University
Role: Co-Investigator
Total amount: \$441,796
- **NIH/NINDS F31NS093983** 2015–2017
Epidemiological and Spatial Methods to Improve Estimates of Neurological Disorders from Population-based Studies
PI: Sahlu, Brown University
Role: Mentor
This NIH F31 training grant provides predoctoral individuals with supervised research training in specified health and health-related areas leading toward the research doctoral degree.
- **Seed Grant** 2014–2016
Institute at Brown for the Study of Environment and Society (IBES)
Effects of Climate and Land-cover Change on Human Infectious Disease Outbreaks
PI: Smith, Brown University/Bauer C

Role: Co-Investigator (2014–2015), **Principal Investigator** (2015–2016)
Total amount: \$150,000

- **Seed Grant** 2013–2014
Institute at Brown for the Study of Environment and Society (IBES)
Communications and Socio-environmental Drivers of Disease Outbreaks
PI: Smith, Brown University
Role: Co-Investigator
Total amount: \$20,000

- **Salomon Faculty Research Awards**, Brown University 2012–2013
Small-area Estimation Using Complex Survey Data
Role: **Principal Investigator**
Total amount: \$7,500

- **USDA Forest Service**, PNW Research Station, Olympia, WA Summer 2011
Statistical Analysis of Spatial Variability and Correlation Among Various Soil Characteristics
Role: Statistics consultant
Total amount: \$2,000

PUBLICATIONS

*Student/Postdoc Authorship; §Corresponding Author

IF: Impact Factor (IF of the journal at time of publication)

Peer-reviewed Publications

48. Tran T, Rousseau MA, Farris D, **Bauer C**, Nelson KC, Doan HQ. The social vulnerability index as a risk stratification tool for health disparity research in cancer patients: A scoping review. *Cancer Causes & Control*. Online ahead of print.
47. Stopka TJ, Laroche MR, Li X, Bernson D, Li W, Ackerson L, **Bauer C**. Opioid-related mortality: Dynamic temporal and spatial trends by drug type and demographic subpopulations, Massachusetts, 2005-2021. *Drug and Alcohol Dependence*. 2023;246:109836. (IF 4.28)
46. Peterson LM, Lee H, Huybrechts I, Biessy C, Neuhauser ML, Haaland B, Krick B, Gunter M, Schulze MB, Jannasch F, Coletta A, Hardikar S, Chaix A, **Bauer C**, Xiao Q, Playdon M. Reliability estimates for assessing meal timing derived from longitudinal repeated 24-hour dietary recalls. *American Journal of Clinical Nutrition*. 2023 Mar 14;S0002-9165(23)46259-4. (IF 7.05)
45. Clark JR, Terwilliger A, Avadhanula V, Tisza M, Cormier J, Javornik-Creegen S, Ross M, Hoffman K, Troisi C, Hanson BM, Petrosino JF, Balliew J, Piedra PA, Rios J, Deegan J, **Bauer C**, Wu F, Mena KD, Boerwinkle E, Maresso AW. Wastewater pandemic preparedness: Toward an end-to-end pathogen monitoring program. *Frontiers in Public Health*. 2023;11. (IF 6.46)
44. Yeung CHC*, **Bauer C**, Xiao Q. Associations between actigraphy-derived rest-activity rhythm

- characteristics and hypertension in US adults. *Journal of Sleep Research*. 2023 Feb 20;e13854. PMID: 36807441. (IF 5.3)
43. **Bauer C**[§], Zhang K, Li W, Bernson D, LaRoche M, Dammann O, Stopka TJ. Small area forecasting of opioid-related mortality: Bayesian spatiotemporal dynamic modeling approach. *JMIR Public Health and Surveillance*. 2023 Feb 10;9:e41450. PMID: 36763450. PMCID: PMC9960038. (IF 14.56)
 42. Gitter A, **Bauer C**, Wu F, Ramphul R, Chavarria C, Zhang K, Petrosino J, Mezzaric M, Gallegos G, Terwilliger AL, Clark JR, Feliz K, Avadhanula V, Piedra PA, Weesner K, Maresso AW, Mena KD. Assessment of a SARS-CoV-2 wastewater monitoring program in El Paso, Texas, from November 2020 to June 2022. *International Journal of Environmental Health Research*. 2023 Jan 3;1-11. PMID: 36595614. (IF 3.41)
 41. **Bauer C**[§], Li X, Zhang K, Lee M, Guajardo E, Fisher-Hoch S, McCormick J, Fernandez ME, Reininger B. A novel Bayesian spatial-temporal approach to quantify COVID-19 testing disparities for small area estimation. *American Journal of Public Health*. 2023 Jan;113(1):40-48. PMID: 36516388. PMCID:PMC9755943. (IF 11.56)
 40. Suk R, Liao K, **Bauer C**, Basil C, Li M. HPV vaccination trends among commercially insured adults aged 27 to 45 before and after advisory committee on immunization practices recommendation change in the US, 2007-2020. *JAMA Health Forum*. 2022;3(12):e224716.
 39. Heckler B*, Lee M, Stone K, **Bauer C**[§], Xiao Q. Cross-sectional and prospective associations of rest-activity rhythms with body mass index in older men: a novel analysis using Harmonic Hidden Markov Models. *Journal of Biological Rhythms*. 2022 Nov 23;7487304221134163. Online ahead of print. PMID: 36416436. (IF 3.65)
 38. **Bauer C**, Zhang K, Xiao Q, Lu J, Hong YR, Suk R. County-level social vulnerability and breast, cervical, and colorectal cancer screening rates in the United States, 2018. *JAMA Network Open*. 2022;5(9):e2233429. PMID: 36166230. PMCID: PMC9516325. (IF 13.35)
 37. Blackburn CC, Jones M, Lee M, **Bauer C**, Rodriguez A, Garcia R, Fisher-Hoch S, McCormick JB, Zhang K, Garrett A, Esteves J. Autoethnographic examination of data-driven, community-tailored COVID-19 response in Brownsville, Texas. *Journal of Humanistic Psychology*. August 2022. doi:10.1177/00221678221118708. (IF 1.87)
 36. Low EV*, Lee M, **Bauer C**, Fisher-Hoch S, McCormick JB, Abughosh S, Essien E, Rodriguez J, Chen H. Association of pubertal stage and weight status with cardiometabolic risk factors in children and adolescents living on the Texas-Mexico border [published online ahead of print, 2022 Jul 11]. *Metabolic Syndrome and Related Disorders*. 2022 Oct;20(8):440-450. PMID: 35819796. PMCID: PMC9595617. (IF 2.36)
 35. Lai H*, Mubashir T, Shiwalkar N, Ahmad H, Balogh J, Williams G, **Bauer C**, Maroufy V. Association of pre-admission opioid abuse and/or dependence on major complications in traumatic brain injury (TBI) patients. *Journal of Clinical Anesthesia*. 2022;79:110719. doi:10.1016/j.jclinane.2022.110719. PMID: 35276593. (IF 6.04)
 34. Xiao Q, Lu J, Matthews C, Zeitzer JM, **Bauer C**[§]. Rest-activity profiles among U.S. adults in a nationally representative sample: A functional principal component analysis. *International Journal of Behavioral Nutrition and Physical Activity*. 2022;19:32. PMID: 35819796. PMCID: PMC8944104. (IF 6.71)

33. Oluwadairo T*, Whitehead L, Symanski E, **Bauer C**, Carson A, Han I. Effects of road traffic on the validity of low-cost particulate matter sensor measurements in Houston, Texas. *International Journal of Environmental Health Research*. 2022;19(3):1086. PMID: 35162113. PMCID: PMC8833980. (IF 3.39)
32. Oluwadairo T*, Whitehead L, Symanski E, **Bauer C**, Carson A, Han I. Effects of aerosol particle size on the measurement of ambient PM_{2.5} with a low-cost particulate matter sensor monitor (LCPMS) in a laboratory chamber. 2022. *Environ Monit Assess* 2022 Jan 6;194(2):56. PMID: 34989887. PMCID: PMC8842881. (IF 2.51)
31. Xiao Q, Playdon M, Matthews C, **Bauer C**. The association between rest-activity rhythms and glycemic markers: the US National Health and Nutrition Examination Survey, 2011-2014. *Sleep*. 2022 Feb 14;45(2):zsab291. PMID: 34897522. PMCID: PMC9013003. (IF 5.14)
30. **Bauer C**[§], Zhang K, Lee M, Jones M, Rodriguez A, Cerda I, Reininger B, Fisher-Hoch S, McCormick J. Real-time geospatial analysis identifies gaps in COVID-19 vaccination in a minority population. *Scientific Reports*. 2021 Sep 13;11(1):18117. PMID: 34518570. PMCID: PMC8437959. (IF 5.13)
29. Xiao Q, Gierach GL, **Bauer C**, Blot W, James P, Jones RR. The association between outdoor light at night and breast cancer risk in black and white women in the southern community cohort study. *Environmental Health Perspectives*. 2021 Aug; 129(8): 087701. PMID: 34379524. PMCID: PMC8357036. (IF 9.03)
28. Erdman E, Young L, Bernson D, **Bauer C**, Chui K, Stopka T. A novel imputation approach for sharing protected public health data. *American Journal of Public Health*. 2021 Oct;111(10):1830-1838. PMID: 34529494. PMCID: PMC8561211. (IF 9.31)
27. **Bauer C**[§], Zhang K, Lee M, Fisher-Hoch S, Guajardo E, McCormick J, de la Cerda I, Fernandez ME, Reininger B. Census tract patterns and contextual social determinants of health associated with COVID-19 in a Hispanic population from South Texas: A spatiotemporal perspective. *JMIR Public Health and Surveillance*. 2021 Aug 5;7(8):e29205. PMID: 34081608. PMCID: PMC8354426. (IF 4.11)
26. Hong S, Liu F, **Bauer C**, Chen Y, Tu W, Zhang J, Hu J, Zhang W, Hu Y, Lynn HS, Li Y, Chang Z, Zhang ZJ. Intra-area factors dominate the spatio-temporal transmission heterogeneity of Hand, Foot, and Mouth disease in China: a modelling study. *Science of the Total Environment*. 2021;775(7):145859. (IF 7.96)
25. **Bauer C**, Champagne-Langabeer T, Bakos-Block C, Zhang K, Persse D, Langabeer J. Patterns and risk factors of opioid-suspected EMS overdose incidents in Houston metropolitan Area, 2015-2019: a Bayesian spatiotemporal analysis. *PLOS One*. 2021;16(3):e0247050. PMID: 33705402. PMCID: PMC7951926. (IF 3.24)
24. Suk R*, Sonawane K, **Bauer C**, Lairson D, Deshmukh AA. Risk of anal cancer in inflammatory bowel disease patients in the US: a population-based study 2008–2018. 2021. *Gastroenterology* 160 (3), S28-S29. (IF 22.68)
23. Zhang K*, Reininger B, Lee M, Xiao Q, **Bauer C**[§]. Individual and community social determinants of health on diabetes management in a Mexican American population. *Frontiers in Public Health*. 2021;8:633340. PMID: 33614572. PMCID: PMC7888279. (IF 3.71)

22. Zhang D, **Bauer C**, Powell-Wiley T, Xiao Q. Neighborhood socioeconomic status trajectories and weight change in a large US cohort of older men and women. *JAMA Network Open*. 2021;4(2):e2036809. PMID: 33544146. PMCID: PMC7865190. (IF 8.48)
21. Xiao Q, **Bauer C**, Layne T, Playdon M. The association between overnight fasting and body mass index in older adults: the interaction between duration and timing. *International Journal of Obesity*. 2021 Mar;45(3):555-564. PMID: 33214704. (IF 4.42)
20. Xie L*, Atem F, Gelfand A, **Bauer C**, Messiah S. United States prevalence of pediatric asthma by environmental tobacco smoke exposure, 2016-2017. *Journal of Asthma*. 2021Apr;58(4):430-437. Epub 2020 Jan 6. PMID: 31877060. (IF 1.8)
19. Shrestha S, **Bauer C**, Hendricks B, Stopka T. Spatial epidemiology: an empirical framework for syndemics research. *Social Science & Medicine*. 2020 Sep 10;:113352. PMID: 32950331. PMCID: PMC7962030. (IF 4.63)
18. Miao H, Gao Q, Feng H, Zhong C, Zhu P, Wu L, Swartz M, Luo X, DeSantis SM, Lai D, **Bauer C**, Pérez A, Rong L, Lairson D. Mathematical modeling of business reopening when facing SARS-CoV-2 pandemic: protection, cost and risk. *Frontiers in Applied Mathematics and Statistics*. 2020;6. (IF 1.74)
17. Sonawane K, Zhu Y, Montealegre J, Lairson DR, **Bauer C**, McGee LU, Giuliano AR, Deshmukh A. Parental intent to initiate and complete the human papillomavirus vaccine series in the USA: a nationwide, cross-sectional survey. *The Lancet Public Health*. 2020;5(9):e484-e492. PMID: 32707126. PMCID: PMC7484349. (IF 26.76)
16. Logan J, **Bauer C**, Ke J, Xu H, Li F. Models for small area estimation for census tracts. *Geographical Analysis*. 2020 Jul;52(3):325–350. PMID: 33041360. PMCID: PMC7546254. (IF 4.27)
15. Dumont M, Roy M, Jodoin PM, Morency F, Houde JC, Xie Z, **Bauer C**, Samad T, Van Dijk K, Goodman J, Descoteaux M. Free water in white matter differentiates MCI and AD from control subjects. *Frontiers in Aging Neuroscience*. 2019;11:270. PMID: 31632265. PMCID: PMC6783505. (IF 4.5)
14. Sahlu I*†, **Bauer C**†, Ganaba R, Preux P, Cowan L, Dorny P, Millogo A, Carabin H†. The impact of imperfect screening tools on measuring the prevalence of epilepsy and headaches in Burkina Faso. *PLOS Neglected Tropical Diseases*. 2019;13(1):e0007109. PMID: 30653519. PMCID: PMC6353216. †equal contribution as first author (IF 3.89)
13. Sahlu I*, Carabin H, Ganaba R, Preux P, Cisse, A.K., Tarnagda Z, Gabriel S, Dermauw V, Dorny P, **Bauer C**, Millogo A. Estimating the association between being seropositive for cysticercosis and the prevalence of epilepsy and severe chronic headaches in 60 villages of rural Burkina Faso. *PLOS Neglected Tropical Diseases*. 2019;13(1):e0007101. PMID: 30677038. PMCID: PMC6345432. (IF 3.89)
12. **Bauer C**, Wakefield J. Stratified space-time infectious disease modeling: with an application to hand, foot and mouth disease in China. *Journal of the Royal Statistical Society Series C*. 2018;67:1379-1398. (IF 1.77)

11. Servadio J*, Rosenthal S, Carlson L, **Bauer C**. Climate patterns and mosquito-borne disease outbreaks in south and southeast Asia. *Journal of Infection and Public Health*. 2018 Jul-Aug;11(4):566-571. PMID: 29274851. (IF 3.32)
10. Carabin H, Millogo A, Ngowi H, **Bauer C**, Dermauw V, Cissé A, Sahlu I, Salvatore A, Preux P, Somé T, Tarnagda Z, Gabrië S, Cissé R, Ouédraogo J, Cowan L, Boncoeur M, Dorny P, Ganaba R. Effectiveness of a community-based educational programme in reducing the cumulative incidence and prevalence of human *Taenia solium* cysticercosis in Burkina Faso in 2011-14 (EFECAB): a cluster-randomised controlled trial. *The Lancet Global Health*. 2018 Apr;6(4):e411-e425. PMID:29530423. PMCID: PMC5873982. (IF 26.76)
9. Harrington C, Holub S, **Bauer C**, Steel E. The distribution of tree roots in douglas-fir forests in the pacific northwest in relation to depth, space, coarse organic matter and mineral fragments. *Northwest Science*. 2017;91(4):326-343. (IF 0.55)
8. Fish L, Wakefield J, **Bauer C**, Self S. Time series modeling of pathogen-specific disease probabilities with incomplete data. *Biometrics*. 2017 Mar;73(1):283-293. PMID:27378138. PMCID: PMC5224700. (IF 1.71)
7. **Bauer C**, Wakefield JC, Rue H, Self SG, Feng Z, Wang Y. Bayesian spline models for the analysis of spatio-temporal count data. *Statistics in Medicine*. 2016 May 20;35(11):1848-54. PMID: 26530705. PMCID: PMC4959802. (IF 2.37)
6. Carabin H, Millogo A, Cissé A, Gabrië S, Sahlu I, Dorny P, **Bauer C**, Tarnagda Z, Cowan L, Ganaba R. Prevalence of and factors associated with human cysticercosis in 60 Villages in three provinces of Burkina Faso. *PLOS Neglected Tropical Diseases*. 2015 Nov;9(11):e0004248. PMID: 26588468. PMCID: PMC4654529. (IF 3.89)
5. Smith KF†, Goldberg M, Rosenthal S, Carlson L, Chen J, **Chen(Bauer) C**†, Ramachandran S†. Global rise in human infectious disease outbreaks. *Journal of the Royal Society Interface*. 2014 Dec 6;11(101):20140950. PMID: 25401184. PMCID: PMC4223919. (IF 4.12)
†equal contribution as first author
4. **Chen(Bauer) C**, Wakefield JC, Lumley T. The use of sampling weights in Bayesian hierarchical models for small area estimation. *Spatial and Spatio-temporal Epidemiology*. 2014 Oct;11:33-43. PMID: 25457595. PMCID: PMC4357363.
3. Mercer L, Wakefield JC, **Chen(Bauer) C**, Lumley T. A comparison of spatial smoothing weighting methods for small area estimation. *Spatial Statistics*. 2014;8:69-85. PMID: 24959396. PMCID: PMC4064473. (IF 2.06)
2. Wang Y, Feng Z, Yang Y, Self S, Gao Y, Longini IM, Wakefield J, Zhang J, Wang L, **Chen(Bauer) C**, Yao L, Stanaway JD, Wang Z, Yang W. Hand, Foot, and Mouth disease in China: patterns of spread and transmissibility. *Epidemiology*. 2011 Nov;22(6):781-92. PMID: 21968769. PMCID: PMC3246273. (IF 4.82)
1. Rupp TS, **Chen(Bauer) C**, Olson M. Sensitivity of simulated boreal fire dynamics to uncertainties in climate drivers. *Earth Interactions*. 2007;11:3-21. (IF 2.17)

Conference Abstract and Posters (Last Three Years Only)

7. Zhang K, **Bauer C** et al. Protocol for adaptive geospatial selections of communities to implement evidence-based practices to increase COVID-19 testing uptake in the Texas RADx-UP study. *2023 RADx-UP Scientific Meeting*.
6. Walker TJ, Zhang K, Lamont A, Diamond P, Craig D, McClam M, Workman L, **Bauer C**, Brandt H, Wandersman A, Fernandez ME. Examining differences in readiness scores across respondent characteristics: a cross-sectional study with employees from federally qualified health center clinics. *2022 Conference on the Science of Dissemination and Implementation, Washington DC*.
5. Workman L, Zhang K, McClam M, Craig D, Walker TJ, Padilla J, Dias E, **Bauer C**, Fernandez ME. Do readiness scores differ by urban/rural characteristics? *2022 Conference on the Science of Dissemination and Implementation, Washington DC*.
4. Nguy L, Ramphul R, Desai M, **Bauer C**, Zamorano A. Identifying HPV vaccination initiation hot/cold spots and associated disparities in Texas. *2022 WAGO Annual Meeting*
3. Tran T, Rousseau MA, Farris D, **Bauer C**, Nelson KC, Doan HQ. Use of the social vulnerability index in cancer research. *2022 17th annual Texas conference on health disparities*.
2. Xiao Q and **Bauer C**. Creating personalized rhythmic profiles of activity and diet for precision nutrition. *2021 NIDDK precision nutrition: research gaps and opportunities workshop*. Best poster award
1. Suk R*, Sonawane K, **Bauer C**, Lairson D, Deshmukh AA. Risk of anal cancer in inflammatory bowel disease patients in the US: a population-based study 2008-2018. *2021 Crohn's & Colitis Congress*.

TEACHING AND STUDENT ADVISING

†Designed new course, ‡Substantial revision/redesign

University of Texas Health Science Center in Houston

Course Title	Semester	Enrollment
Introduction to Biostatistics in Public Health (PH 1690)	Fall 2021	56
Introduction to Biostatistics in Public Health (PH 1690)	Fall 2020	52
Introduction to Biostatistics in Public Health (PH 1690)	Spring 2020	64
‡ Introduction to Biostatistics in Public Health (PH 1690)	Fall 2019	47
†Spatial-temporal Analysis of Population Health Data	Spring 2023	16
†Spatial-temporal Analysis of Population Health Data	Spring 2021	9
†Spatial-temporal Analysis of Population Health Data	Spring 2020	7

Brown University

Lectures/Workshop

- Guest lecture on ‘Geospatial Data Science Supporting to Local Public Health Departments in COVID-19 Control and Mitigation’, KIN127L/PH2998, Current Topics in Infectious Diseases: COVID-19, UTSPH, Spring 2021.
- Guest lecture on ‘Geospatial Approaches in Disease Control/Prevention and its Application in Epidemiology’ in PH2990 Epidemiology Seminar, UTSPH, Spring 2020.

Course Title	Semester
Principles of Biostatistics and Data Analysis (PHP 2510)	Fall 2015
‡Principles of Biostatistics and Data Analysis (PHP 2510)	Fall 2014
‡Principles of Biostatistics and Data Analysis (PHP 2510)	Fall 2013
†Generalized Linear Models (PHP 2605)	Spring 2015
Spatial Statistics (PHP 2604)	Spring 2016
†Spatial Statistics (PHP 2604)	Spring 2014
†Spatial Statistics (PHP 2604)	Spring 2013

- Guest lecture on ‘Spatial-temporal Statistical Models: Some Methods and Applications’, PH 2126 Fundamentals and Applications of GIS, UTSPH, Fall 2020.
- Guest lecture on ‘Hypothesis Testing’ in PH2770 NIH Proposal Development, a required course for Epidemiology PhD students, Department of Epidemiology, UTSPH, Fall 2019.
- Introduction to Statistics (Stat 300), an elementary statistics course for undergraduate students. University of Alaska Fairbanks, Fairbanks, Alaska, Fall 2005/Spring 2006.
- Analysis of Epidemiological Data, Brown-China NIEHS Epidemiology and Biostatistics Workshop. 2 hours. Xi’an, China, Summer 2015.
- Introduction to Spatial Statistics Workshop (3 hours), S4 GIS Institute, Brown University, Winter 2013/Summer 2014.
- Introduction to Statistics, Brown IMSD, Brown University, Summer 2014. 4 hours.

STUDENT ADVISING

Thesis/Dissertation Advisor

- Jiachen Lu, PhD Biostatistics, UTSPH, current (Dissertation Chair/Supervisor/Advisor).
A Bayesian hidden markov model framework to investigate multiple circadian rhythmicities
 - ActiGraph digital data summit travel award, 2022
 - Keith D. Burau, Ph.D. scholarship award, UTHealth, 2022-23
 - Best overall performance award in 2021 preliminary examination, UTHealth SPH, 2021
 - UTHealth SPH outstanding new student scholarship award - Aurelia Murphy Killian endowment in public health
- Tzuruei Chao, MS Biostatistics, UTSPH, graduated August 2022 (Thesis Supervisor)
Sampling design of wastewater surveillance to detect SARS-CoV-2: A simulation study using geospatial kriging method
- Minji Chae, MS Biostatistics, UTSPH, graduated August 2022 (Thesis Chair)
Predicting hospitalization and length of stay following emergency department admission in working adults with chronic kidney disease.
- Yustinah Ndambakuwa, MS Biostatistics, UTSPH, graduated August 2022 (Thesis Chair)
Identification of a metabolite network associated with anthracycline-response in the ipsc-cardiomyocyte model system
- Sungjin Cho, MS Biostatistics, UTSPH, graduated August 2022 (Thesis Co-supervisor with Dr. Michael Swartz)
Investigating critical windows of exposure to PM_{2.5} during pregnancy on estimated fetal weight using tree-based distributed lag non-linear model (TDLNM)

- Haley Barnes, MS Biostatistics, UTSPH, graduated May 2022 (Thesis Chair/Thesis Supervisor)
The impact of rest-activity patterns and neighborhood characteristics on weight status in the Dallas Heart Study: a Bayesian multilevel model approach
- Brian Heckler, MS Biostatistics, UTSPH, graduated August 2021 (Thesis Chair/Thesis Supervisor)
Studying the impact of rest-activity rhythms on metabolic health using a circadian Hidden Markov model approach
- Kehe Zhang, MS Biostatistics, UTSPH, graduated August 2020 (Thesis Chair/Thesis Supervisor)
Individual and community social determinants of health associated with diabetes management in a Mexican American population
- Emily Silvia, MPH, 2016, Brown University
Geographic variation in receipt of rehabilitation services post lower limb amputation surgery in the VA system
- Jun Ke, MS Biostatistics, 2016, Brown University
Spatial boundary detection using Bayesian hierarchical modeling
- Zihao Zhang, MS Biostatistics, 2016, Brown University
The association between ambient air pollution exposure and birth outcome: an analysis from a cohort study in Wuhan, China.
- Joe Servadio, MS Biostatistics, 2015, Brown University
Climate determinants of vector-borne infectious disease outbreaks in Asia
Winner of the best poster for Master's students, Brown University School of Public Health Research Day, 2015
- Alyssa Feldman, MS Biostatistics, 2014, Brown University
Analyses of the temporal trends of global infectious disease outbreaks

Thesis/Dissertation Committee Member

- Adrianna Maliga, PhD in Department of Epidemiology, Human Genetics, and Environmental Sciences (EHES), current, UTSPH (Committee Member/Minor Representative)
Surveillance of acute febrile illnesses in central America
- Anh Ngoc Ly, PhD in Department of Epidemiology, Human Genetics, and Environmental Sciences (EHES), current, UTSPH (Committee Member/Minor Representative)
Hand hygiene infrastructure and practices in schools in Belize during the COVID-19 pandemic: A national assessment and intervention
- Kathryn G Burford, PhD in Department of Epidemiology, Human Genetics, and Environmental Sciences (EHES), current, UTSPH-Austin (Committee Member/Minor Representative)
Measuring objective traffic-related safety for active commuting to school
- Rachel White, PhD in Department of Epidemiology, Human Genetics, and Environmental Sciences (EHES), current, UTSPH (Committee Member/Minor Representative), graduated December 2022
What is contributing to COVID-19 mortality in Harris County?
- Jennifer Matas, PhD in Department of Epidemiology, Human Genetics, and Environmental Sciences (EHES), current, UTSPH (Committee Member, Minor Representative)
Investigation of individual and social predictors of severe maternal morbidity: An analysis of

privately insured population in the United States, 2007-2019

- Erica Cantu, DrPH in Health Promotion and Behavioral Sciences, UTSPH (Committee Member)
- Anayeli H. Morales, PhD in Epidemiology, current, UTSPH-Brownsville (Committee Member)
- Ariana L. Garza, PhD in Epidemiology, current, UTSPH-Brownsville (Committee Member, Minor Representative)
Metabolic and genetic determinants of elevated liver fat content in the FELS longitudinal study
- Allison Rector, PhD in Biostatistics, UTSPH-Houston (Committee Member), graduated May 2023.
Knot selection, mediation analysis, and modeling $PM_{2.5}$ and COVID-19 outcomes in a distributed lag non-linear model (TDLNM) framework
- Alaina M Beauchamp, PhD in Department of Epidemiology, Human Genetics, and Environmental Sciences (EHES), UTSPH-Dallas (Committee Member/Minor Representative), graduated December 2022
Assessing the mental health of women at the intersection of intimate partner violence and animal cruelty: Personal and population level risk factors for co-victimization
- Yen-an Zhu, PhD in Management, Policy and Community Health(MPACH), UTSPH, graduated August 2022 (Committee Member/Minor Representative)
Urban-rural disparities in the utilization of post-stroke rehabilitation and long-term outcome among stroke survivors in the United States 2010-19
- Isela De La Certa, PhD in Epidemiology, UTSPH-Brownsville, graduated August 2022 (Committee Member/Minor Representative)
Improving local COVID19 outbreak response using precision public health
- Vijayashri Rallapalli, PhD in Management, Policy and Community Health(MPACH), UTSPH, graduated August 2022 (Committee Member/Minor Representative)
Geographic variation in Hepatocellular Carcinoma incidence and its association with area-based socioeconomic measures in Texas from 2007-2016: A population based study
- Ee Vien Low, PhD in Pharmacy, University of Houston, graduated August 2021 (Committee Member)
Physical and mental health among Mexican American children and adolescents living on the US-Mexico border
- Immanuelle Azebe-Osime, MPH in Epidemiology, UTSPH, graduated August 2021 (Committee Member)
Trends and risk factors for hospital delivery associated blood transfusions in Texas, 2009-2018: A cross-sectional study
- Temitope Oluwadairo, PhD in Epidemiology, UTSPH, graduated May 2021(Committee Member/Minor Representative)
Evaluation of a low-cost sensor device for the assessment of community exposures to fine particulate matter in Houston, Texas
- Randa Hamden, PhD in Management, Policy and Community Health(MPACH), UTSPH, graduated May 2021 (Committee Member/Minor Representative)
The impact of hurricane HARVEY on maternal health outcomes in FEMA designated disaster areas in Texas

- Ryan Suk, PhD in Health Economics, UTSPH, graduated December 2020 (Committee Member/Minor Representative)
The burden of HPV-associated cancer in inflammatory bowel disease patients
- Lauryn Winter, MPH in Epidemiology, UTSPH, graduated December 2020 (Committee Member)
Characterization of age-associated COPD progression in the COPD gene cohort
- Abigail Sedory, PhD in Biostatistics, UTSPH, graduated May 2020 (External Reviewer)
Sample size calculations for longitudinal mediation analysis with continuous-time Markov chain variables.
- Xinyue Qi, PhD in Biostatistics, UTSPH, graduated 2019 (External Reviewer)
Bayesian modeling of censored data with application to meta-analysis of immunotherapy trials
- Ida Sahlu, PhD in Epidemiology, 2014-2017, Brown University (Committee Member)
Estimating the burden of neurological disorders in low-resource settings
- Bahar Erar, PhD in Biostatistics, 2013-2016, Brown University (Committee Member)
Whole genome regression for modeling gene \times environment interactions in structured populations
- Frances Terry, MPH, 2014-2015, Brown University (Reader)

Visiting Student/Summer Internship Supervised

- Dileka Gunawardana, CPRIT summer undergraduate innovation Program, Summer 2020, Rice University.
- Gabriella Novak, undergraduate summer intern, Summer 2019, University of Rochester.
- Ping Wang, PhD exchange student, Spring 2015, School of Public Health, City University of Hong Kong.

PROFESSIONAL SERVICE

Department Service:

- Department strategical planning committee Present
- Chair of faculty search committee (Non-tenure Teaching-track) Fall 2018 – Fall 2019
Department of Biostatistics and Data Science, UTSPH
- Student admission committee Spring 2019 – Present
Department of Biostatistics and Data Science, UTSPH
- Teaching quality and efficiency committee Spring 2019 – Present
Department of Biostatistics and Data Science, UTSPH
- Data science track in Biostatistics ScM program ad-hoc committee Spring 2016
Department of Biostatistics, Brown University
- Faculty liaison for Sheridan teaching center Fall 2014 – Spring 2016
Department of Biostatistics, Brown University
- Graduate program committee Fall 2013/Fall 2014/Fall 2015/Spring 2016
Department of Biostatistics, Brown University
- PhD qualifying exam committee Spring 2015
Department of Biostatistics, Brown University

- Master program admission committee Spring 2013/2015/2016
Department of Biostatistics, Brown University
- PhD program admission committee Spring 2014
Department of Biostatistics, Brown University
- Biostatistics seminar organizing committee Fall 2013 – Spring 2014
Department of Biostatistics, Brown University

School and University:

- Advisory board, Spanish stroke warning signs research advisory committee, American Stroke Association (ASA) and The University of Texas Health Science Center at Houston (UTHealth) Fall 2021
- Co-chair, Data Committee, Texas SARS-CoV-2 Variant Network Project Fall 2021–Present
- Lead, Biostatistics Teaching Assistants (TA) Bootcamp, UTSPH Summer 2020
- Member, UTHealth COVID-19 Research Task Force Spring 2020–Present
Informatics workgroup
- Member, UTSPH – MD Anderson population health initiative Spring 2020–Present
Community engagement & service delivery workgroup
- Member, Faculty search committee for UTSPH Brownsville Fall 2019–Spring 2021
- Member, MPH admission committee, School of Public Health, Brown University Spring 2016
- MPH core advisor, School of Public Health, Brown University 2013–2015
- Member, graduate curriculum committee, School of Public Health, Brown University 2014–2015

Conference Organizing and Service to Professional Societies

- Judge for ASA SBSS 2022 student paper competition, 2022.
- President, Houston Area Chapter of the American Statistical Association (HACASA), 2022-2023.
- Steering committee member, CPCRn, October 2021–Present.
- Reviewer, NIH HEAL Initiative, June 2022.
- Reviewer, Special Emphasis Panel, NIH/NIAID Emergency Awards: Rapid Investigation of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease 2019 (COVID-19), February 2021
- Reviewer, NIH HEAL Initiative, June 2019
- Cancer Prevention and Control Research Network (CPCRn) Social Deprivation Workgroup, Co-Chair, 2021-Present.
- Organizing committee, ENAR 2022.
- President-elect, Houston Area Chapter of the American Statistical Association (HACASA), 2021-2022.
- Organizer, ICSA invited session “Bayesian analysis of complex survey data”, 2020
ICSA 2020 Applied Statistics Symposium, Houston, TX.
- Member, local organizing committee/Poster session committee, ICSA 2020 Applied Statistics

Symposium, Houston, TX, 2020.

- Volunteer, StatFest, The University of Texas Health Science Center at Houston, Houston, TX, 2019
- Organizer, topic-contributed paper session ‘Recent advances in spatial and spatial-temporal analysis, Joint Statistical Meetings (JSM), Denver, US, 2019
- Co-chair, local organizing committee, 4th International Conference on Big Data and Information Analytics, Houston, TX, 2018.
- Organizer, invited session ‘Recent advances in Spatial statistics’, The 29th New England Symposium (NESS), University of Connecticut, CT, 2015

Referee Service:

Journal of American Statistical Association (JASA), Statistics, Politics and Policy, Spatial Statistics, Journal of official statistics, Annals of Applied Statistics (AOAS), Journal of Royal Statistical Society Series C (JRSSC), Epidemiology, Social Science & Medicine (SSM), R Journal.

TALKS AND PRESENTATIONS

- Invited talk: Identification and quantification of SARS-CoV-2 testing disparities for small area estimation using Bayesian spatial-temporal modeling
2023 International Chinese Statistical Association (ICSA) Applied Statistics Symposium, Ann Arbor, Michigan, June 11-14, 2023.
- Invited panelist: Panel on Careers in Data Science.
2023 International Chinese Statistical Association (ICSA) Applied Statistics Symposium, Ann Arbor, Michigan, June 11-14, 2023.
- Invited talk: Bayesian spatiotemporal models for COVID-19 disparities in small area estimation: Application in infectious disease epidemiology.
2023 New England Statistical Society (NESS), Boston, MA, June 3-6, 2023.
- Invited talk: Geospatial data science to support local public health departments in COVID-19 control and mitigation.
2023 Alamo Symposium in Statistics, San Antonio, Texas, March 10-11, 2023.
- Selected: Quantification of chronic disease burden in the continental US counties.
Solving critical problems in cancer control using spatial science: A national NCI comprehensive cancer center meeting, University of Southern California, Los Angeles, CA, Jan 18-19, 2023.
- Invited talk: Spatial-temporal data science for population health.
Social and Health Statistics Seminars, University of Massachusetts Lowell, October 19, 2022.
- Selected talk: How two institutions partnered to democratize geospatial data
Presenter: Bauer/Ramphul/Strong/Walsh
The Healthier Texas Summit, Austin, Texas, October 20-21, 2022.
- Selected talk: Novel quantifications of rest-activity rhythms using 24-hour actigraphy data to inform diabetes status.
The Digital Physical Activity and Diet (dPAD) 2022 Fall Symposia. UTHealth School of Public Health, Houston, Texas, September 8-9, 2022.

- Invited talk: Stratified space-time infectious disease modeling: with an application to hand, foot and mouth disease in China.
London School of Hygiene & Tropical Medicine (LSHTM), London, UK, March 2022
- Invited talk: Geospatial data science support to disease surveillance and the design and implementation of community-based interventions
CPCRN Social Deprivation Interest Group, May 2021
- Invited talk: Geospatial data science support to disease surveillance and the design and implementation of community-based interventions
Department of Epidemiology, MD Anderson Cancer Research Center, Houston Texas, May 2021.
- Invited talk: Supporting local public health departments in COVID-19 control and mitigation – my humble experience and lessons
ASA North Texas Chapter, November 2020.
- Invited talk: Supporting local public health departments in COVID-19 control and mitigation – my humble experience and lessons
Department of Biostatistics and Data Science, University of Texas School of Public Health in Houston, Houston, TX, November 2020.
- Invited talk: Spatial-temporal statistical models: some methods and applications.
Department of Mathematics, University of Houston, Houston, TX, February 2019.
- Contributed talk: Probabilistic modeling of sleep and awake states in Alzheimer’s disease.
Contributed e-poster: Using wearable devices to quantify modulation of circadian rhythms.
Joint Statistical Meetings (JSM), Vancouver, Canada, August 2018.
- Invited talk: Bayesian space-time models for the analysis of infectious disease surveillance data.
Department of Biostatistics, Yale University, April 5, 2016.
- Invited talk: Spatial-temporal statistical models: some methods and applications.
IBM Thomas J. Watson Research Center, September 18, 2015.
- Module of Analysis of epidemiological data, Brown-China NIEHS Epidemiology & Biostatistics Workshop, Xi’an China, June 2-5, 2015
- Statistical analysis of the ambient air pollution data in Wuhan, China.
China Forum on Public Health, Environment, and Health Policy, Brown University, April, 2015
- Session organizer (invited): Recent advances in Spatial statistics.
The 29th New England Symposium (NESS), University of Connecticut, April, 2015
- Invited talk: The use of sampling weights in Bayesian hierarchical models for small area estimation.
Department of Statistics, University of Connecticut, CT, November, 2014
- Invited talk: The use of sampling weights in Bayesian hierarchical models for small area estimation.
Department of Management Science, Tokyo University of Science, Tokyo, Japan, July 2014
- Invited talk: Bayesian spline models for the analysis of spatial-temporal count data.
The 3rd IMS-APRM (Institute of Mathematical Statistics Asia Pacific Rim Meeting), Taipei, Taiwan, July 2014
- Invited talk: Bayesian spatial-temporal models for the analysis of China Hand-foot-mouth

surveillance data.

China CDC, Beijing, China, June 2014

- Contributed poster: Bayesian spline models for the analysis of spatial-temporal count data.
1st Women in Statistics Conference, Cary, NC, May 2014
- Contributed talk: Space-time models for aggregated infectious disease data with different strains.
Joint Statistical Meetings (JSM), Montreal, Canada, August 2013.
- Invited: Bayesian spline models for the analysis of spatial-temporal count data.
15th IMS New Researchers Conference, Montreal, Canada, August 2013.
- Invited talk: Bayesian spline models for the analysis of spatial-temporal count data (In the session of Recent Development in Spatial Statistics)
The 27th New England Symposium (NESS), University of Connecticut, April 2013
- Invited talk: Bayesian modeling of health data in space and time
Department of Mathematics and Statistics, University of Massachusetts Amherst, April 2013
- Invited talk: Spatial statistics and its applications.
S4 GIS Institute, Brown University, January 2013
- Contributed poster: Bayesian spline models for the analysis of spatial-temporal count data.
Spatial Statistics Conference, University of Miami, December 2012
- Contributed talk: The use of sampling weights in Bayesian hierarchical models for small area estimation.
Joint Statistical Meetings (JSM), San Diego, CA, July 2012.

AWARDS AND HONORS

- R. Palmer Beasley, M.D. faculty award for innovation, UTHealth Houston SPH, 2023
- Travel award for Woman in Statistics conference, Raleigh, NC, May 2014 (\$500)
- Sheridan junior faculty teaching fellow award, Brown University, 2013–2014 (5 recipients total)
- Travel award for the Joint Statistical Meeting (JSM), University of Washington Seattle, 2012
- Tuition award for the 2nd Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID), Seattle, WA, 2010
- Top scholar award, Department of Statistics, University of Washington Seattle, 2007

PROFESSIONAL MEMBERSHIPS

- Member, Committee on Women in Statistics (CoWIS), American Statistical Association, 2022 – Present
- Past-president (2023), President (2022), President-elect (2021), Houston Area Chapter of the American Statistical Association (HACASA)
- American Statistical Association, 2010 – Present