

StatFest 2019



A One-Day Conference for Undergraduate Students
September 21, 2019

The University of Texas
Health Science Center at Houston (UT Health)

Welcome!

Dear Student:

It is our pleasure to welcome you to the StatFest 2019 conference. We have an outstanding day planned for you. Leaders from academia, government, and the private sector have all come to share their insights and experiences with a goal of helping you understand the tremendous opportunities available in the statistical sciences.

This day is all about you! Take full advantage of this unique opportunity. Ask questions. Introduce yourself to speakers. Take the time to meet other students. If each of you leaves here having learned something that will direct your career path and having made personal contacts that will support you in the future, then this will, indeed, be a great day.

Thank you for your presence today. If there is anything we can do for you while you're here, please don't hesitate to ask.

Enjoy YOUR day!

Sincerely,

StatFest 2019 Organizing Committee

The University of Texas Health Science Center at Houston

The University of Texas Health Science Center at Houston (UTHealth) School of Public Health works to improve the state of public health in Texas every day. Each of our six campuses is strategically placed to meet the public health education and research needs of the diverse populations across Texas. The Houston campus is located in the heart of the largest medical center in the world, the Houston's Texas Medical Center. UTHealth offers students unmatched opportunities for research and employment across the state. UTHealth School of Public Health is the only school of public health in the nation with campuses in Austin, Brownsville, Dallas, El Paso, Houston, and San Antonio. Each campus has its own faculty and research specialties. Students can attend class at any of the six campuses via Interactive Television (ITV).

In addition to the School of Public Health, UTHealth is home to schools of biomedical informatics, biomedical sciences, dentistry, medicine and nursing. It also includes a psychiatric hospital, multiple institutes and centers, a growing network of clinics and outreach programs in education and care throughout the region. The School of Public Health is accredited by the Council on Education for Public Health (CEPH) and the university is accredited by the Southern Association of Colleges and Schools (SACS).

Overview

StatFest is a one-day conference aimed at encouraging students from under-represented groups to consider careers and graduate studies in the statistical sciences. The conference is an ongoing initiative of the American Statistical Association's (ASA) Committee on Minorities in Statistics.

The first StatFest was held in 2001 at Spelman College in Atlanta, GA. This "Mini StatFest," as it was then called, exposed students from Spelman and the Atlanta University Center to dynamic role models and information on careers in statistics. Since then, StatFest has grown into a one-day regional conference and has been held at several institutions around the country.

Past Venues

2018	Amherst College	2008	Lamar University
2017	Emory University	2007	Eli Lilly & Company
2016	Howard University	2006	University of Texas, El Paso
2015	University of Chicago	2005	Florida A&M University
2014	North Carolina State University	2005	University of Hawaii, West Oahu
2013	Rice University	2003	North Carolina State University
2012	San Francisco State University	2002	Meharry Medical College
2010	Spelman College	2002	Hampton University
2009	University of Iowa (part of Iowa Field of Dreams Conference)	2001	Spelman College

Conduct Policy

As an activity sponsored by the American Statistical Association (ASA), StatFest is committed to providing an atmosphere that encourages the free expression and exchange of ideas. Consistent with this commitment, it is the policy of the ASA that all participants in ASA activities, including StatFest, will find a welcoming and respectful environment free from unlawful discrimination, harassment, and retaliation.

All aspects of StatFest are subject to the ASA's conduct policy, including but not limited to event attendees, statisticians, students, guests, staff, contractors, exhibitors, and participants in scientific sessions, tours, and other social events.

All individuals must behave responsibly in ASA activities in which they participate. Threatening physical or verbal actions and disorderly or disruptive conduct will not be tolerated. Harassment, including verbal comments relating to gender, sexual orientation, disability, race, ethnicity, religion, age, national origin, gender identity or expression, veteran status or other protected status, or sexual images in public spaces, deliberate intimidation, stalking, unauthorized or inappropriate photography or recording, inappropriate physical contact, and unwelcome sexual attention, will not be tolerated. All individuals participating in ASA activities must comply with these standards of behavior.

Violations should be reported to the organizer of the activity. In the ASA's sole discretion, unacceptable behavior may result in removal or denial of access to meeting facilities or activities and other penalties, without refund of any applicable registration fees or costs. In addition, violations may be reported to the individual's employer. Repeat offenders may be banned from future ASA activities.

StatFest 2019 Agenda

Saturday, September 21, 2019

Houston Campus: 1200 Herman Pressler, Houston, TX 77030

Austin Campus: 1616 Guadalupe St, Suite 6.300, Austin, TX 78701

8:00 – 9:00 AM	Continental Breakfast and Registration
9:00 – 9:15AM	Welcome and Opening Remarks <i>Adriana Pérez, Local PC Chair, UTHealth</i> <i>Eric Boerwinkle, Dean, School of Public Health, Professor, Human Genetics Center and Department of Epidemiology, M. David Low Chair in Public Health, Kozmetsky Family Chair in Human Genetics, and Associate Director, Human Genome Sequencing Center at Baylor College of Medicine, UTHealth</i> <i>Rob Santos, 116th President-Elect, American Statistical Association</i>
9:15 – 9:20AM	Recognition of Sponsors <i>Therri Usher, StatFest PC Vice-Chair</i>
9:20 – 10:05AM	Keynote Address <i>Reneé Moore, Emory University</i>
10:05 – 10:25AM	Networking & Interpersonal Skills (Talk) <i>Jemar Bather, Harvard University</i>
10:25 – 10:40AM	Break & Networking
10:40 – 11:25AM	Opportunities in Statistics and Data Science Panel (Government & Academia) <i>Moderator: Sean Simpson, Wake Forest University</i> <i>Jeri Mulrow, Westat</i> <i>Briana Stephenson, Harvard University</i> <i>Loni Tabb, Drexel University</i> <i>Michael Thomas, Georgia Department of Public Health</i>
11:25 – 11:55AM	Featured Speaker <i>Hadley Wickham, RStudio</i>
11:55 – 12:05PM	Group Photo

12:05 – 12:35PM	Group A: Lunch & Networking Groups
12:35 – 1:05PM	Group B: Lunch & Networking Groups
1:05 – 1:50PM	Opportunities in Statistics & Data Science Panel (Industry) Moderator: Portia Exum, <i>SAS</i> Jason Bernard, <i>Major League Baseball</i> Jenny Yang, <i>Clover Health</i> Ismael Flores, <i>Westat</i> Vladimir Geneus, <i>Eli Lilly</i>
1:50 – 2:20PM	Preparing for Admission to Graduate School (Talk) Folefac Atem, <i>UTHealth</i>
2:20 – 2:45PM	Break & Networking
2:45 – 3:45PM	Parallel Session A: <i>The Graduate School Experience</i> Moderator: Danisha Baker, <i>Becton Dickinson</i> Derrick Bonney, <i>University of Texas at El Paso</i> Kyle Duke, <i>North Carolina State University</i> Elysia Garcia, <i>UTHealth</i> Parallel Session B: <i>Diversity and Inclusion: Overcome the Challenges of Changing the Culture</i> Moderator: Cody Chiuzan, <i>Columbia University</i>
3:45 – 4:00PM	Conference Wrap-Up, Evaluation Form, & Closing Remarks
4:00 – 5:00PM	Poster Session & Ice Cream Social

2019 ASA StatFest Networking Initiative

Goal

The goal of this initiative is to highlight the importance of networking for personal and professional development and to give participants an opportunity to employ tips and best practices.

Networking Opportunities

The workshop's schedule provides several opportunities for you to network with professionals and your peers:

1. Continental breakfast
2. Morning break/snack
3. Lunch
4. Afternoon break/snack
5. Poster session and ice cream reception
6. Conclusion of panels

We encourage you to use these opportunities to connect with people you didn't know when you arrived. Make new friends and start building new relationships.

-----Tips and Best Practices-----

Be visible

Don't sit in your seat all day. Get out and mingle.

Be intentional

Know what you want and seek to connect with people who already have it.

Be helpful

Consider how you help others. What will you bring to the relationship?

Think long-term

Connecting is the first step to relationship building.

Rejection is good

Don't be afraid of rejection. Not all relationships will pan out, and that's ok.

Listen

Listen to learn and understand, not just to respond.

Ask

Questions create bridges. Show interest by asking questions.

Follow-up

Relationships don't build themselves. Maximize the opportunity by following-up.

Poster Abstracts

Sample Selection Model in a Smoking Cessation Missing Data Analysis

Name(s): Hector Moran^{1,2}, Yuelin Li, Ph.D¹

Institution: ¹Memorial Sloan Kettering Cancer Center, Department of Epidemiology & Biostatistics, Department of Psychiatry & Behavioral Sciences, ²Hunter College of the City University of New York (CUNY).

Abstract: Missing data is common in smoking cessation randomized clinical trials (RCT) and present statistical challenges when assessing treatment effects of an intervention. Previous imputation techniques include a conservative approach that “missing=smoking”, designed for data that may be missing not at random (MNAR). Sample selection model has been proposed as an alternative mechanism to model missing data. Data from an RCT scheduled reduced smoking behavioral intervention was used sampling pre-surgical newly diagnosed cancer patients (n=185). Logistic regression equations for smoking abstinence (Y=1) and the outcome being observed (R=1) were simultaneously modeled in a likelihood function and maximum likelihood estimations were calculated using the “maxLik” package in R. Using four covariates, there was no association between missingness and smoking abstinence (OR=5.94, 95% CI=5.81-17.69). Despite the high odds ratio, which would be tantamount to claiming “missing=smoking”, the likelihood function’s instability produced high standard errors and thus further analysis is needed to present stronger statistical claims for or against “missing=smoking”.

Tingle Therapy: An analysis of ASMR User’s Subjective Relief

Name(s): Daniela Beckelhymer, Emily Thompson, Carin Perilloux

Institution: Southwestern University

Abstract: Autonomous Sensory Meridian Response (ASMR) is a static-like tingling sensation that begins at the scalp and radiates down the body when triggered by particular auditory, visual, or tactile stimuli. It is the first physiological phenomenon with psychological effects brought to light by YouTube: individuals create and post trigger videos on YouTube to help users relax and sleep. Based on user comments, we predicted that ASMR provides significant benefits to users who suffer from a variety of disorders. We recruited participants through social media sites catering toward ASMR users. Volunteers ($N = 26,930$, $M_{age} = 26$) completed a questionnaire that included demographics, the ASMR-15 scale, self-reports of relief experienced, and presence of psychological and physiological symptoms (self-reported and assessed via the DSM-V screener). Women scored significantly higher than men and non-binary participants on all ASMR-15 subscales (i.e., altered consciousness, relaxation, sensation, affect). Women reported using ASMR content significantly fewer days per week than men, but reported a significantly longer duration per sitting than men. Participants who reported higher education scored significantly lower on most ASMR-15 subscales than participants who reported lower levels of education. Individuals with psychiatric symptoms (self-assessed or based on DSM-screener results) were more likely to report having experienced ASMR at some point, and scored higher on ASMR subscales (though the pattern differed by disorder). Using regression, we created linear models to predict experiencing different aspects of ASMR and subjective relief scores; we will discuss each model in detail. These findings expand our

understanding of this phenomenon and the benefits ASMR could provide to individuals coping with physical or mental discomfort.

An Examination of on Frailty through the Lens of Deficit Accumulation in Adults with Type 2 Diabetes Mellitus

Name(s): Daniel Ojeranti¹, Felicia R. Simpson, PhD¹; and Mark A. Espeland, PhD²

Institution: ¹Department of Mathematics, Winston-Salem State University and Department of Biostatistics and Data Science, ²Wake Forest School of Medicine

Abstract: As we grow older, many of us accrue multiple conditions and diseases associated with aging. The aging of the population coupled with the epidemic of obesity have led to a rapid increase in the number of older, obese individuals with diabetes. Diabetes and obesity are often described as accelerators of biological aging. Deficits accumulation indices have been developed to serve as a marker of how quickly an individual ages. Within a large, randomized controlled clinical trial, we examined two deficit accumulation frailty indices. We explored the association of frailty indices and subgroups based on traditional risk factors for aging. Older individuals, racial/ethnic minorities, obese individuals, those with poorer diabetes control, longer durations of diabetes, hypertension, and smokers had significantly higher mean baseline frailty index scores than those without these characteristics.

Stochastic Modeling of Infectious Diseases

Name(s): Tamer Oraby¹

Institution: ¹The University of Texas Rio Grande Valley

Abstract: Modeling the spread of infectious diseases before the introduction of vaccines and models' validation have been widely studied since the work of D. Bernoulli in 1766. That work was followed by Ross in 1916, Brownlee in 1918, Greenwood in 1920, Kermack and McKendrick in 1927, Soper in 1929, Greenwood in 1931 and 1946, and Bailey in 1953. While ordinary differential equations have received greater attention than other types of models, stochastic models of diseases have been attractive for many research activities. In this poster, I will present some of those stochastic models of diseases and their deterministic counter-models. I will also present simulations and data fitting to the models.

Are Food Stamps Supporting All Families?: The Effectiveness of the Supplemental Nutrition Assistance Program by Household Size

Name(s): Isabel Gomez¹, Karina Lieb¹, Ester Zhao¹

Institution: ¹Smith College

Abstract: This research investigates food security among American households participating in the SNAP (Supplemental Nutrition Assistance Program), also known as food stamps. This research uses data from the 2017 IPUMS National Health Interview Survey from about 11,000 households. The relationship between household size and food security for SNAP-receiving households is investigated with logistic regression. Findings have shown that, on average, the larger the

household of SNAP participants, the lower their probability of food security. From this, we can infer that SNAP is not as effectively providing access to nutritious food for larger households.

TargetScore: Prediction of Adaptive Resistant Pathway Responses

Name(s): Heping Wang¹

Institution: ¹MD Anderson

Abstract: Targeted therapies have been substantially successful in treatment of diverse cancer types. However, resistance to therapy is virtually inevitable and can manifest as a lack of response to therapy (intrinsic) or disease progression after temporary response (acquired resistance). We hypothesize that collective changes in pathway activities are better predictors of drug resistance and mitigation strategies with drug combinations than abundances of individual molecules. Accordingly, we developed the Algorithm "TargetScore". The method is based on statistical and network analyses of high-throughput drug response data. By analyze drug response, the method collect pathway adaptation mechanisms and discover effective drug combinations.

Epidemiology of Pediatric Traumatic Brain Injury with Regards to Age and Sex

Name(s): Sarika Aggarwal¹

Institution: ¹University of Pittsburgh

Abstract: This ongoing investigation focuses on data analysis conducted on 2013 hospital readmission data provided through the Healthcare Cost and Utilization Project Nationwide Readmission Database (HCUP-NRD). Using SAS, we generated various data analyses in regards to how pediatric traumatic brain injuries (TBI) characteristics and outcomes differ by age and sex. Data analyses conducted include frequency tables, confidence intervals, chi-square tests, and summary statistics for age and sex with regards to TBI severity, ECODE (cause), and procedural type. This study is important in order to better understand the epidemiology of pediatric TBI so that guidelines for treatment and current protocol can be both more efficient and effective. A literature review of existing information about the epidemiology of pediatric TBI was also done in addition to reviewing other uses of the HCUP databases and NRD dataset in order to identify conclusions of similar work.

An Interactive Web App to Visualize Police Traffic Pulling

Name(s): Jiahui Niu¹, Chengjun Zhang¹

Institution: ¹Denison University

Abstract: This project aims to create an interactive application to visualize police traffic pulling in the US. There are two parts of the app: An interactive map and Graphs. The graphs display statistics by drivers' demographics and pulling outcomes. It serves as a tool for social science researchers to investigate policing. Data is collected by Stanford Open Policing Project.

Perception of Bias in Hiring Practices

Name(s): Angela Jauregui¹

Institution: ¹Smith College

Abstract: This study examined the perception of racial bias in hiring practices. Participants (n = 139) completed a six question survey designed to measure the perception of racial bias in hiring practices when a job applicant belongs to the same ethnic group as the hiring manager. We hypothesized that participants would perceive that a shared ethnic background would effect the

hiring process. Our results suggest that people's perception of bias is more prevalent with applicants than it is with employers.

Assessing Protein Stability via Network Statistics

Name(s): Breanna Richards¹

Institution: ¹Amherst College

Abstract: While in the folding state, proteins are responsible for carrying out many critical roles in the body. Misfolding can lead to diseases such as cystic fibrosis and amyloid-related diseases. This study was conducted to determine which properties of proteins in the network form are good predictors of protein folding and unfolding rates. Using R, bootstrapping techniques were applied to numerous network statistics for 118 different proteins in order to determine the properties with the most predictive power. Linear regression analyses revealed that utilizing average path length and local clustering coefficient leads to significant correlations with both folding and unfolding rates.

Structural Equation Modeling of Winning Strategy in Player's Unknown Battleground (PUBG)

Name(s): Yifan Ma¹, Rachel Yan¹

Institution: ¹Smith College

Abstract: How to win one of the most popular online multiplayer battle royale game, Player's Unknown Battleground (PUBG)? we tested a conceptual model of associations among constructs predicting solo player's damaged cause, level of active exploration, match duration and winning percentage in game Player Unknown Battlegrounds (PUBG). Our analysis shows that the amount of damage caused by players and actively exploring jointly contribute to winning the game. Findings suggest that when making strategic plans, players should consider a more proactive approach, particularly taking advantage of riding vehicles.

Geographic Distribution, Seasonality, and Temporal Trend of Skin Bleaching Interest in the US: a Surveillance Proxy in the Absence of National Prevalence Estimates

Name(s): Steven Lawrence¹

Institution: ¹Icahn School of Medicine at Mount Sinai

Abstract: Skin bleaching or lightening (SBL), is a global practice triggered historically by racism and classism. This ungendered behavior is currently fashionable, yet it can expose individuals to harmful chemicals like mercury, hydroquinone, and corticosteroids, yielding adverse outcomes ranging from skin atrophy to mercury poisoning. However, reliably estimating the national prevalence is challenging using traditional epidemiological methods. To fill this gap, we analyzed web searches of SBL using Google Trends data to examine the geographic distribution, seasonality, and temporal trend of this practice in the United States (US) during 2004-2019. Among 38 states with available data, those in the upper quartile of SBL (interest >72.4%) included California, District of Columbia, Texas, Nevada, Maryland, Georgia, Florida, New Jersey, New York, and Mississippi, for which the non-white populations range from 44%-63%. We observed an increasing (positive) trend of approximately 2.7% per month, on average, in SBL searches over 15 years and summer to autumn peak. Our findings provide a first glimpse for policy and public health experts into the magnitude and increasing uptake of SBL in the US.

Speakers, Participants, and Key Personnel

KEYNOTE SPEAKER



Reneé H. Moore, Ph.D., is a Research Associate Professor in the Department of Biostatistics and Bioinformatics, Rollins School of Public Health, and Director of the Biostatistics Collaboration Core at Emory University. She earned a Bachelor of Science in mathematics and completed the secondary mathematics education program at Bennett College and earned her PhD in Biostatistics from Emory University. In her first faculty position at the University of Pennsylvania, Perelman School of Medicine, primary appointment in the Department of Biostatistics and Epidemiology and secondary appointment in the Department of Psychiatry, Dr. Moore was actively involved in designing and

implementing clinical trials via Data Coordinating Centers and was the faculty statistician in the Center for Weight and Eating Disorders. Next Dr. Moore taught up to seven classes per year and continued her obesity research at North Carolina State University, Department of Statistics. In 2015, Dr. Moore returned to Emory University. She spends her time mentoring, teaching, and collaborating with clinical investigators from Penn, UNC, Emory, and beyond. Dr. Moore is a Fellow of the American Statistical Association (ASA). She is the current Treasurer of ENAR (the Eastern North American Region of the International Biometric Society). Dr. Moore is a past chair of the ASA Committee on Minorities in Statistics (StatFest), past co-chair of the ENAR Fostering Diversity in Biostatistics Workshop and remains very active in these and other initiatives within ENAR and ASA.

FEATURED SPEAKER



Hadley Wickham, Ph.D., is Chief Scientist at RStudio, winner of the 2019 COPSS award, a member of the R Foundation, and Adjunct Professor at Stanford University and the University of Auckland. He builds tools (both computational and cognitive) to make data science easier, faster, and more fun. His work includes packages for data science (the tidyverse: including ggplot2, dplyr, tidyr, purrr, and readr) and principled software development (roxygen2, testthat, devtools, pkgdown). He is also a writer, educator, and speaker promoting the use of R for data science. Learn more on his website, <http://hadley.nz>.

WELCOME AND OPENING REMARKS



Adriana Pérez, Ph.D., is Professor at the Department of Biostatistics and Data Science, The University of Texas Health Science Center at Houston, School of Public Health, Austin campus. She received her Bachelor's degree in Statistics from the National University of Colombia, and her M.S. and Ph.D. degrees in Biostatistics from Tulane University. Dr. Pérez has engaged in a wide range of research projects: theoretical model evaluation accounting for imputation uncertainty, fitting complex data, analysis of cluster randomized community trials, clinical trials and analysis of food intake involving measurement error and tobacco regulatory science. Dr. Pérez has expertise in conducting and disseminating research findings of population- and clinical-based studies of adolescents and adults, as well as developing new statistical methodologies. She has completed several grants satisfactorily and currently the National Cancer Institute has

granted her an R01 entitled "Age of initiation of tobacco products among USA youth and young adults". Dr. Pérez has over 100 publications. Besides her interest in Biostatistics she is interested in promoting diversity in our field and fostering recruitment, retention and promotion of minorities in our field. Dr. Pérez is an active member of the International Biometric Society and the American Statistical Association (ASA). She has held numerous elected positions in several professional organizations including co-chairing ENAR's diversity workshop from 2009-2011, member of the ASA Committee on Minorities Statistics, organizer member of the StatFest since 2016, etc.



Eric Boerwinkle, Ph.D., is the Dean of the School of Public Health at the University of Texas Health Science Center at Houston, Professor, Human Genetics Center and Department of Epidemiology, M. David Low Chair in Public Health, Kozmetsky Family Chair in Human Genetics, and Associate Director, Human Genome Sequencing Center at Baylor College of Medicine. Dr. Boerwinkle joined the UTHealth faculty in 1986 and served as chair of the Department of Epidemiology, Human Genetics and Environmental Health at UTHealth School of Public Health from 2003-2015. Author of more than 800 scientific papers, Boerwinkle has led groundbreaking

research on the connection between genes and health. He and his colleagues completed the world's first genome-wide analyses for a variety of cardiovascular disease risk factors, including hypertension and diabetes. These investigations have been a critical step in developing drugs that lower disease risk. Boerwinkle earned a Ph.D. in human genetics from the University of Michigan, Ann Arbor, where he also earned master's degrees in human genetics and statistics. Boerwinkle has served on several national research panels, including the Advisory Council for the National Human Genome Research Institute and the Board of External Advisors for the National Heart, Lung and Blood Institute, part of the National Institutes of Health. Boerwinkle has also served as an editor of several journals including *Circulation*, *Epidemiology*, *Genetic Epidemiology* and the *American Journal of Epidemiology*.



Robert (Rob) Santos, M.A., is vice president & chief methodologist at the Urban Institute, Washington, DC. Born and raised in San Antonio, Texas, he received a BA in mathematics from Trinity University in San Antonio after attending San Antonio Community College. He attended graduate school at the University of Michigan and received an MA in Statistics while learning the art/science of survey sampling at the UM Inst. for Social Research, Survey Research Center. With over 40 years of experience, his expertise spans quantitative and qualitative research design, sampling, survey operations, and statistical analysis; specialty areas include Hispanics, blacks, undocumented immigrants, and other disadvantaged populations. Rob has worked across a wide range of policy areas including

education, health, immigration and refugees, environmental issues, housing discrimination, and politics. He held executive-level leadership positions at the Univ. Michigan Survey Research Center and at NORC and was a partner of NuStats, LLC in Austin, Texas. Rob served on numerous panels and committees of the National Academies. He also served on the editorial board of Public Opinion Quarterly and held various elected board positions in the American Association for Public Opinion Research (AAPOR), Washington Statistical Society, and the American Statistical Association (ASA). This spring he was elected to be the 116th President of ASA (with presidency in 2021). He has served as AAPOR president (2013-14) and ASA Vice President (2015-17). Santos is an ASA Fellow and a 2006 ASA's Founder's Award recipient.

RECOGNITION OF SPONSORS



Therri Usher, Ph.D., is a Mathematical Statistician in the Center for Drug Evaluation and Research at the U.S. Food and Drug Administration. Dr. Usher provides statistical support to the regulation of antiviral drugs and drugs to treat inborn errors. She also provides statistical support for patient-focused drug development in the area of antimicrobial products. She also sits on the Regional Advisory Board of the Eastern North American Region of the International Biometric Society and is the Vice-Chair of StatFest 2019. Dr. Usher received her BS in Mathematical Sciences at the University of Texas at Dallas and her PhD in Biostatistics from Johns Hopkins University, where she conducted research on the impact of health

disparities on the aging process.

NETWORKING FACILITATOR



Jemar Bather, M.S., is an HIV Training Grant Fellow in Harvard's PhD program in Biostatistics. He is dedicated to increasing diversity in Statistics at the local and national level, a passion reflected in his academic pursuits and outreach activities. He currently studies racial and behavioral differences among children born to HIV-infected mothers. He also assists various programs that introduce minority students to statistics, both within Harvard in StatStart and the Summer Program in Biostatistics and Computational Biology, and at the national level in the American Statistical Association's Diversity Workshop and Mentorship Program.

Bather received his BS in Statistics from Penn State and his MS in Applied

Statistics from NYU. In his leisure time, he frequents the psychology and business sections of used bookstores. He also enjoys stand-up comedy, playing spades, and fantasy football.

OPPORTUNITIES PANEL (ACADEMIA AND GOVERNMENT)



at Chapel Hill.

Sean L. Simpson, Ph.D., is an Associate Professor in the Department of Biostatistics and Data Science at the Wake Forest School of Medicine (WFSM). His main research focus is on the development of statistical tools for the analysis of whole-brain network data. He is also involved in a number of health disparities related collaborations. In addition to his appointment at WFSM, Dr. Simpson is an adjunct associate professor at UNC – Chapel Hill, core faculty in Biomedical Engineering, affiliate faculty in Neuroscience, a member of the Laboratory for Complex Brain Networks, and an Affiliate of the Maya Angelou Center for Health Equity at WFSM. Dr. Simpson holds a Bachelor of Arts in Applied Mathematics from Harvard University and a PhD in Biostatistics from the University of North Carolina



Jeri Metzger Mulrow, M.S., is currently a Vice President and Director of Statistics and Evaluation at Westat. She recently retired from the Federal Government where she served in the Senior Executive Service for the last five years of her Federal career. Jeri served as the Principal Deputy Director at the Bureau of Justice Statistics at the Department of Justice from January 2016 through January 2019. Prior to that, she was the Deputy Division Director at the National Center for Science and Engineering Statistics (NCSES), National Science Foundation. She spent nearly 15 years at NCSES starting out as a mathematical statistician, moving to supervisory statistician, and finally as the Deputy Division Director. Her Federal career also includes working at the Statistics of Income Division of the Internal Revenue Service for eight years as a mathematical statistician and at the National Institute for Standards and Technology in the Statistical Engineering Division. Additionally, Jeri spent a short amount of her career outside the Federal Government. She was at Ernst & Young, a large accounting firm, for almost five years working to build up a statistical consulting group named QUEST. She also spent some time at NORC at the University of Chicago. Early in her career, she was a lecturer at Southern Illinois University. Jeri has a Bachelor's in Mathematics from Montana State University and a Master's in Statistics from Colorado State University. She is a Fellow of the American Statistical Association (ASA) and past Vice-President of ASA. She has served in several leadership positions on committees and workgroups of the ASA, including the Council of Sections Governing Board and the Washington Statistical Society.



Briana Stephenson, Ph.D., is an Assistant Professor of Biostatistics at the Harvard T. H. Chan School of Public Health. She received her Bachelor of Science (B.S) in Mathematics from the Massachusetts Institute of Technology, a Master of Public Health (M.P.H.) with a concentration in Biostatistics from the George Washington University School of Public Health and Health Services, and a Doctor of Philosophy (Ph. D.) in Biostatistics from the University of North Carolina Gillings School of Global Public Health. She completed her postdoctoral training at the UNC Collaborative Studies Coordinating Center serving as a research associate on the Hispanic Community Health Study/Study of Latinos. Prior to transitioning to academia, Briana spent a few years in the federal government sector, working as a mathematical statistician for the U. S.

Food and Drug Administration's Office of Regulatory Affairs, and an Oak Ridge Institute of Science and Education (ORISE) Biostatistician fellow for the Department of Defense's Force Health Protection and Readiness Program/Psychological Health Strategic Operations. Her research has primarily focused on Bayesian nonparametrics and model-based clustering with applications in nutritional epidemiology, population health, and health policy.



Loni Philip Tabb, Ph.D., is an Associate Professor of Biostatistics in the Department of Epidemiology and Biostatistics at Drexel University's Dornsife School of Public Health in Philadelphia, PA. She received her PhD in Biostatistics from Harvard University in 2010 and her B.S. (2003) and M.S. (2005) in Mathematics from Drexel. Since her arrival at Drexel University, she has collaborated as a Co-Investigator on several National Institutes of Health, National Science Foundation, Annie E. Casey Foundation, and Sidney Kimmel Cancer Center funded projects. Most

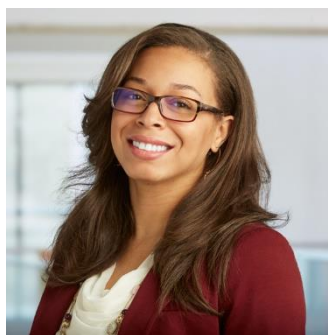
recently, Dr. Tabb has used spatial statistics and spatial epidemiology methods in the area of cardiovascular disease, with a focus on assessing the spatial patterning of cardiovascular health here in the US between blacks and whites. Dr. Tabb has also taught several courses at Drexel, which include Biostatistics, Survival Data Analysis, Advanced Statistical Computing, and Bayesian Data Analysis. In addition to her in-classroom instruction, Dr. Tabb also mentors significantly, both formally and informally. Dr. Tabb is an active member of several biostatistics and public health professional societies – including current co-chair of the Fostering Diversity in Biostatistics Workshop for the Eastern North American Region of the International Biometric Society annual Spring Meetings.



Michael M. Thomas, M.S., is a Biostatistician working for the Georgia Department of Public Health. He assists epidemiologists with syndromic surveillance and monitoring opioid overdoses in the state. Michael graduated from Kennesaw State University's Honors Program with a BS in Mathematics, minoring in Applied Statistics and Computer Science. Michael also received an MS in Biostatistics from the Drexel University's Dornsife School of Public Health. During his time at Drexel, he also worked as a statistical programmer for Autism Services, Education, Resources, and Training; a team helping inform autism policy in Pennsylvania. He has also

worked as a tutor and volunteered as a mentor for high school and undergraduate students. Michael's current primary academic interests are statistical software and spatial statistics.

OPPORTUNITIES PANEL (INDUSTRY)



Portia Exum, M.S., is from Newark, NJ. She earned her Master of Statistics degree from North Carolina State University in Raleigh, NC in 2013 after completing her Bachelor of Arts in Mathematics and Statistics at Smith College in Northampton, MA. Her concentration in graduate school was Biostatistics, motivated by her undergraduate research with Dr. Nicholas Horton in missing data methods in survival analysis. As a graduate student she worked as a teaching and graduate assistant under Dr. Renee Moore teaching SAS labs and conducting a clinical trial for children with sleep apnea. Portia also worked as an intern with SAS Institute Inc. and

was hired full time as an Analytical Software Tester after graduating from graduate school. Currently, she is a Team Lead working to enable test automation that is reliable, scalable, and easy for non-developers across the BIRD Testing Division. In her spare time, she collaborates with clinicians on sleep and obesity studies.



Jason Bernard, M.S., is a Baseball Research Analyst at Major League Baseball Advanced Media (MLBAM). He is also formerly an Adjunct Professor for the Preston Robert Tisch Institute for Global Sport at the New York University School of Professional Studies. He received a B.S. degree in Sport Management from St. John's University prior to earning his M.S. degree in Sports Business from New York University in 2015. Jason's work at MLBAM consists of providing statistical analysis to the data provided by the player tracking technology known as Statcast™. This includes the creation of new stats used throughout the industry, such as

Catch Probability, Outs Above Average, and Sprint Speed. His work as a professor at NYU included teaching advanced analytics and critical baseball thinking to individuals considering a career in baseball operations or analytics.



Ismael Flores Cervantes, Ph.D., is a senior statistician with 25 years of experience at Westat in sample design and selection, variance estimation, and data analysis. Dr. Flores Cervantes has worked on several education and health surveys, including the National Assessment of Educational Progress, the Head Start National Reporting System, and the Head Start Family and Child Experiences Survey, the National Survey of America's Families and the 2001 and 2003 California Health Interview Surveys, and currently the Population-Based HIV Impact Assessment surveys of 12 sub-Saharan African counties. Dr. Flores Cervantes has participated as a member of the Council on Food, Agricultural, and Resource Economics advisory panel for the National Agricultural Statistics Service of the U.S. Department of Agriculture; served as a consultant for Mexico's National Institute of Education Evaluation, the Packaging Machinery Manufacturers

Institute, and the World Bank; and conducted seminars on sampling, weighting, and variance estimation in the United States and Abroad. Dr. Flores Cervantes holds a Bachelor of Science degree from the Universidad of the Americas, a Master of Science degree from the University of Texas at Austin and a doctoral degree from The University of Maryland College Park.



Vladimir J. Geneus, Ph.D., is a Research Scientist at Eli Lilly & Company. He serves as lead statistician helping in the design of clinical studies and experimental designs; and as medical affairs statistician overseeing ad hoc analyses and disclosures. Prior to his position at Lilly, Vladimir has gained much experience in statistics through various fields such as industry (Pfizer, Inc.), government (Florida Department of Education), and academia (University of Arkansas Medical School). His interests include nonparametric statistics, design of experiments, and Bayesian designs. Vladimir graduated from the University of Massachusetts, Amherst with a Bachelor of Science degree in Mathematics, from Northeastern University with a Master of Science degree in Applied Mathematics, and from Florida

State University with a Master of Science and a Doctor of Philosophy degrees in Statistics. Vladimir remains passionate and optimistic as ever in helping undergraduate and graduate students, especially underrepresented students, transition into their post-doctoral careers.



Jenny Yang, Ph.D., leads the medication adherence data science program at Clover Health, where she looks to fully leverage data science with scalable experimentation and optimization. Her team sits between engineering, product, and clinical operations in order to facilitate data driven product development. She is also deeply passionate about diversity and inclusion at Clover, where she founded and facilitates the Women in Data Science group and launched the first external mentorship program in partnership with Insight Data Science. She is a public health fanatic at heart, with a PhD in Biostatistics from University of North Carolina at Chapel Hill and prior work in public health survey research, statistical epidemiology, and statistical genetics.

PREPARING FOR ADMISSION TO GRADUATE SCHOOL



Folefac Atem, Ph.D., is the lead statistician on several studies conducted at the Center for Pediatric Population health at UTHealth , the latest being the understanding of obesity in preschoolers. Dr. Atem's primary research of interest is in developing non-parametric and semi-parametric estimators with application to causal inference, censored predictors, missing data problems and mixed model theory. Developing statistical methodology for both observational and experimental studies that make efficient use of the data collected by investigators while limiting the assumption about the data. He has mastered many different well-developed statistical methodologies to apply them in the etiology of a disease or to use as instrument in the understanding of different health conditions. Additionally he has developed several methodologies for

censored data using single imputation with bootstrap and multiple imputation. He is currently developing an inverse probability weights approach for censored that could be conveniently applied to survey data analysis.

THE GRADUATE SCHOOL EXPERIENCE PANEL

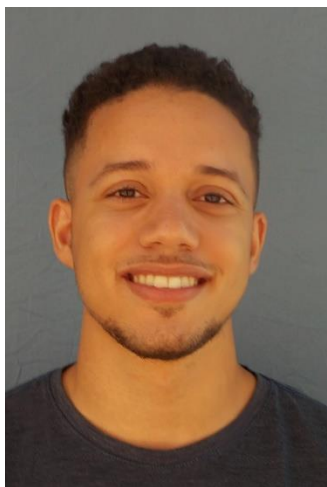


Danisha S. Baker, Ph.D., attended Florida State University in Tallahassee for her postsecondary education. There, she completed her undergraduate degree programs, earning a Bachelor of Science in Statistics and Bachelor of Art in Psychology. Dr. Baker continued her education at her Alma Mater when she was accepted into their Doctoral Program, where she obtained her Doctorate of Philosophy in Biostatistics. Dr. Baker began her professional career as a Senior Scientist in Irradiations and Statistics with the Naval Nuclear Laboratory supporting a wide range of technical projects involving nuclear reactor

design, testing, manufacturing, fleet support, and maintenance. Dr. Baker currently works as a Senior Data Scientist with Becton Dickinson MedMined Analytics team where she consults with hospitals and pharmaceutical companies on projects including infectious disease prevention, identifying healthcare associated infections, and streamlining house-wide antimicrobial stewardship efforts.



Derrick Kwesi Bonney is a graduate teaching assistant at the University of Texas at El Paso, pursuing a masters in Statistics. He has research interests in survival, clustering, mortality, genetics and statistical consultancy. He has received many scholarships, such as International Association of Black Actuaries. He was recently awarded the Boyd Harshbarger Travel Award on the 55th Southern Regional Council on Statistics, which was co-sponsored by American Statistical Association and National Science Foundation in Carrollton, Kentucky. He is currently working with the department head to start American Statistical Association Student Chapter at the University of Texas at El Paso.



Kyle Duke is a fourth year PhD student studying statistics at North Carolina State University. His work, under Dr. Eric Laber, focuses on data-driven decision making. This work applies reinforcement learning and bandit algorithms to help us move towards personalized medicine and overall better treatment outcomes as a population. Further research interests include design of experiments and survival analysis. In undergraduate school, he studied mathematics with a research area in geometric combinatorics. Kyle is also a Southern Regional Education Board scholar and a mentor in the McNair Peer Mentors Program.



Elysia Garcia, M.P.H., is a Ph.D. Biostatistics candidate within the Department of Biostatistics and Data Science at the University of Texas Health Science Center School of Public Health in Houston. She earned a Bachelor of Science in Statistics from Baylor University and graduated from the Baylor University Honors College in 2014. After completing her undergraduate degree program, she earned a Master of Public Health degree with a concentration in Biostatistics from the University of North Texas Health Science Center and became Certified in Public Health in 2016. Ms. Garcia has worked in varying capacities as a statistician during her academic career, including as a statistical consultant for various medical organizations, a teaching assistant for graduate biostatistics courses, and an independent graduate researcher. Her research interests

include summarizing population outcomes from complex survey designs, longitudinal data analysis, survival analysis, and genetics/ bioinformatics.

DIVERSITY AND INCLUSION



Cody Chiuzan, Ph.D., is an Assistant Professor in the Department of Biostatistics at Mailman School of Public Health, Columbia University. She received her MS in Statistics in 2009 from the University of South Carolina and PhD in Biostatistics in 2014 from the Medical University of South Carolina. Dr. Chiuzan's research area focuses on development of early phase clinical trial designs, with particular interest in cancer immunotherapeutic agents. She is affiliated with Herbert Irving Comprehensive Cancer Center and currently serves as the main statistician on several oncology trials. She is the Director for the Biostatistics Fee-For-Service Consulting Program and the Co-Director for Educational Initiatives of the NIH CTSA Columbia Biostatistics, Epidemiology and Research Design Resource (BERD) Resource. Dr. Chiuzan is passionate about statistical education in various learning

formats. She has developed new courses, workshops, and boot camps for graduate students and professionals interested in learning statistical methods with applications in biomedical research. She serves as Chair of the Diversity Committee (Department of Biostatics) and she is actively engaged in the School's Self, Social and Global-Awareness (SSGA) Taskforce.

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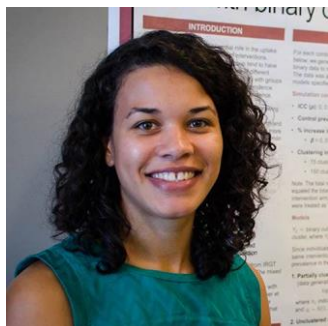
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mentoring first-generation and/or low-income students.

Brittney Bailey, Ph.D., is currently a Postdoctoral Fellow of Statistics at Amherst College and will start as an Assistant Professor there next summer. Her research involves the analysis of clinical trials with nested designs and methods for handling missing data in these designs, and she is particularly interested applications in behavioral health. Dr. Bailey obtained her PhD in Biostatistics from THE Ohio State University and her BA in Mathematics with a minor in Statistics from Messiah College. She was the first in her family to go to college and is recovering from being low-income, so an important part of her work is advocating for and



Chittams also has significant experience in mentoring high school students, undergraduate, and graduate students one-on-one through the Diversity Initiative in Research for Underrepresented Minorities (DRUM) program that he initiated in 2001. Throughout his career, he has helped to train over 100 interns in statistics.

Jesse Chittams is the Managing Director of the Biostatistics Consulting Unit at the University of Pennsylvania's Office of Nursing Research. Mr. Chittams joined the University of Pennsylvania in 1994 after graduating with a degree in Mathematical Statistics from the University of Maryland. With over 20 years of experience, Mr. Chittams has acquired considerable expertise in data management and statistical analysis through his managerial roles at several data coordinating centers. Furthermore, Mr.



Adrian Coles, Ph.D., is a senior research scientist at Eli Lilly and Company. He collaborates with clinical investigators in the Neuroscience therapeutic area to help design and oversee the execution of clinical studies. Prior to joining Lilly, Dr. Coles was a clinical researcher at the Duke Clinical Research Institute and an instructor in Duke University's Department of Biostatistics and Bioinformatics where he taught survival analysis to graduate students. He holds an MS and PhD in Statistics from North Carolina State University, where he was the first African-American male to earn a doctorate from the time-honored program. Dr. Coles participates in multiple initiatives that serve underrepresented minorities in his profession, community, and workplace.



Nagambal Shah, Ph.D., is currently professor Emerita of the Spelman College Mathematics Department where she has served for more than forty years. She received her Bachelor's degree in Mathematics and Masters in Statistics from India and M.S. and Ph.D. from University of Windsor in Ontario Canada. Several of her students have gone to graduate school and received Ph.D. in Statistics/Biostatistics from institutions like MIT, UNC Chapel Hill, University of Maryland, U.C. Berkeley, University of Birmingham Alabama, Rice University, NC State University and SUNY. In 2001 she coordinated and hosted at Spelman College the first StatFest, a one day conference aimed at encouraging undergraduate Minority students to pursue careers and graduate studies in statistical sciences; StatFest continues to be a major activity of the ASA's Committee on

Minorities in Statistics. In 2005 she spearheaded the efforts to host and obtain funding for the first Infinite Possibilities Conference. She is an advocate for diversity in graduate education, especially for minorities and women and received the 2001 Martin Luther King Jr. Community service Award for Excellence in Education and Diversity from Emory University. In 2003 she was selected as a SENCER (Science Education for New Civic Engagements and Responsibilities) faculty by AAC&U for her course CHANCE which was selected as one of four featured SENCER Models. She is the 2005 recipient of Spelman College Presidential Award for College Service, the 2006 Vulcan Materials Co. Teaching Excellence Award and 2014 True Blue Award. She is a Fellow of ASA.



Felicia R. Simpson, Ph.D., is an Assistant Professor in the Department of Mathematics at Winston-Salem State University. Dr. Simpson received her BA in Mathematics from Albany State University and her Ph.D. in Biostatistics from Florida State University. Prior to joining Winston-Salem State University, Dr. Simpson worked as a Mathematical Statistician at the Center for Drug Evaluation and Research at FDA, Division of Biometrics IV. Her research interests include design and analysis of clinical trials, aging, survival analysis, latent class analysis, and the study of rare infectious diseases. Dr. Simpson is an active member of the ASA and International Biometric Society. She is passionate about increasing the exposure of statistics and biostatistics among students in underrepresented populations. Dr. Simpson is a member of the committee on minorities in statistics from the American Statistical Association and currently serves as co-chair for the ENAR Fostering Diversity in Biostatistics Workshop.



Dionne Swift, Ph.D., joined Procter and Gamble as a Statistician shortly after receiving her Ph.D. in mathematical statistics from The Ohio State University in 2000. Dionne has worked in conjunctions with engineers and scientists in the Corporate Research, Fabric & Home Care and Family Care business units. Currently, Dr. Swift is a Principal Statistician providing essential statistical support and consultation on issues of study design, analysis strategy, and interpretation of analysis results for BioSciences and Life Sciences organizations. Dr. Swift has extensive background and experience with statistical design, test method development and validations (i.e., GR&R's), statistical modeling and

simulation in variety of areas – products development research, consumer research, image analysis and genomics. Her current research interests include experimental design, multivariate analyses, prediction and classification methods, and statistical methods in “omics” area - genomics, proteomics, and metagenomics.



Tian Zheng, Ph.D., is Professor and Chair of Statistics at Columbia University and Associate Director for Education of Columbia's Data Science Institute. She obtained her PhD from Columbia in 2002. She develops novel methods for exploring and understanding patterns in complex data from different application domains such as biology, psychology, climatology, and etc. Her current projects are in the fields of statistical machine learning, spatiotemporal modeling and social network analysis. Professor Zheng's research has been recognized by the 2008 Outstanding Statistical Application Award from the American Statistical Association (ASA), the Mitchell Prize from ISBA and a Google research award. She became a Fellow of American Statistical Association in 2014. Professor Zheng is the receipt of 2017 Columbia's Presidential Award for

Outstanding Teaching. In 2019, she is the section chair for ASA's section on Statistical Learning and Data Science.

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Thanks to the Department of Biostatistics and Data Science at the University of Texas Health Science Center at Houston (UTHealth) for submitting and obtaining the grant entitled "Developing the next generation of biostatisticians" (PI: Dr. DeSantis) and to the American Statistical Association's Biometrics section for awarding the department a grant of \$5,000 for travel of participants within Texas.

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Our Department offers the following education programs:

- Data Science Certificates
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- MS/PhD in Public Health with a major in Biostatistics
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Our Department hosts three research and collaboration/service centers:

- Coordinating Center for Clinical Trials (CCCT) which has a more-than-40-year history of successfully coordinating large multicenter clinical trials and providing comprehensive services for clinical trial operation, data management and data analysis.
- Center for Big Data in Health Sciences (CBD-HS) hosts several Big Data research projects, including development of predictive models and heterogeneous data integration methods for Electronic Healthcare Record (EHR) data, insurance claim data and public databases or data repositories.
- Center for Biostatistics Collaboration and Data Services provides opportunities for our faculty and students to collaborate and interact with biomedical and health science investigators to address scientific questions using their statistical and data science skills.

Prospective students can visit us at: <https://sph.uth.edu/divisions/biostatistics/>

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