Rate per 100,000

>7.4

3.7 - 7.4

2.4 - 3.7

1.2 - 2.4

0.6 - 1.2

<0.6

Winter

Summer

Non-O157

SCHOOL OF
PUBLIC HEALTH
UNIVERSITY OF MINNESOTA

Division of Biostatistics & Health Data Science

Annual Report
2023–2024

Table of Contents

From the Division Head

It is once again my pleasure to provide you with an update on annual activities in the Division of Biostatistics & Health Data Science. The last academic year was eventful, and I appreciate you taking a few minutes to reflect with me on the achievements of the past year.

The biggest news in the last year is likely the change that you've already noticed. On October 24, 2023, the division changed its name to the Division of Biostatistics & Health Data Science (BHDS). The new name better captures the full scope of the research and educational offerings within the division. While we remain leaders in clinical trials and our other traditional areas of strength, we currently have people in our division doing tremendous work in biomedical imaging, wearable technology, and mobile health — all areas that fit under the health data science umbrella. As many of you know, the division has gone through multiple previous names, from Biometry and Informatics, to Biometry, and most recently Biostatistics. This reflects the dynamic nature of the division and our desire to stay on the cutting edge of data-centric research in public health and biomedical research.

In addition to the name change, last year was an eventful year for BHDS. The division welcomed two new faculty members: Dr. Erjia Cui, who joins the division as an assistant professor after completing his PhD at Johns Hopkins, and Dr. Harrison Quick (PhD '13), who returns to the division as an associate professor after previously being a faculty member at Drexel University. In addition, we had three promotions: Dr. Sandra Safo was promoted to associate professor with tenure, while Drs. Weihua Guan and Julian Wolfson were promoted to professor. In addition to her promotion, Dr. Safo also received the Committee of Presidents of Statistical Societies Emerging Leader Award, one of the top awards for junior faculty in the field of biostatistics. Finally, after 45 years in the division, Dr. Chap Le retired in January of 2024. Dr. Le's accomplishments are truly outstanding and include being a founding member of the Masonic Cancer Center, publishing 200 scientific papers with over 12,000 citations, and teaching over 4,000 students over the last four and a half decades. I congratulate Dr. Le on his outstanding career and wish him the best of luck during retirement.

BHDS remained a research powerhouse, receiving nearly $35 million in research awards in the last fiscal year. The division has a diverse research portfolio consisting of innovative statistical methods research, high-impact interdisciplinary team science, and the coordination of large national and international clinical trials and research networks in the Coordinating Centers for Biometric Research. In addition, BHDS received 4 of 12 large and medium seed grants awarded from the University of Minnesota Data Science Initiative during their first round of funding, highlighting our position as data science leaders on campus.

Enrollment in our graduate programs continued an upward trend with total enrollment in our graduate programs reaching an all-time high with 124 students (60 PhD, 40 MS, 24 MPH). Last year also marked the graduation of our first cohort of the MPH in Public Health Data Science. The MPH program reflects the growing scope of quantitative research in public health and biomedical research and has played a major role in our increased enrollment over the last several years. In addition, our MS and PhD programs continue to be regarded as among the top programs in the field of biostatistics, and our graduate students continue to receive local and national recognition for their achievements.

In addition to our research and educational efforts, BHDS continues to make an impact on our community through our outreach program - Biostatistics Community Outreach and Engagement (BCOE). In the last year, BCOE continued its partnership with local public-school districts to expand biostatistics and data science education to middle and high school students. The work of BCOE is, in part, funded by our donors, who donated over $10,000 to BHDS on Give to the Max Day last November. We are incredibly grateful for the support and thank everyone who contributed.

BHDS attracts some of the top prospective students in the field from prestigious undergraduate institutions throughout the United States and across the globe. Financial support is needed to attract talented students, and we would not be successful without the support of our philanthropic partners. I hope you'll consider making a generous contribution to the Biostatistics Fund (give.umn.edu/giveto/sphbiostat). Contributions to this fund provide us with the resources to recruit and train the future leaders of our discipline in a collegial and supportive environment. Thanks in advance for your ongoing support of BHDS.

I appreciate you taking a few minutes to learn about the accomplishments of the Division of Biostatistics & Health Data Science. Please feel free to contact me if you have any questions about activities in BHDS; I'm always happy to hear from alumni and friends of the division. I also look forward to seeing some of you in person at our annual receptions at ENAR and JSM.

Thanks, and best wishes for the coming year!

Joseph S. Koopmeiners, PhD
Mayo Professor and Head
Division of Biostatistics
& Health Data Science
School of Public Health
University of Minnesota

Donors to the Division of Biostatistics and Health Data Science – School of Public Health

We thank our alumni and friends of the Division for their generous support of the Biostatistics Dissertation Fellowship, Biostatistics Fund, Jacob E. Bearman Student Achievement Award in Biostatistics, James D. Neaton, PhD Endowment Fund, James R. Boen Award, and John E. Connett First-Year Student Award.

In acknowledgment of our donor's generosity, this list recognizes contributions for the period of July 1, 2023 and June 30, 2024.
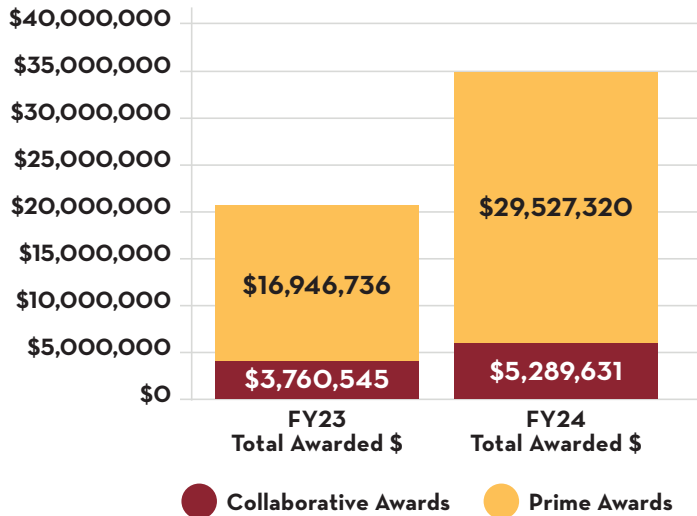
3M Foundation Inc

AbbVie Foundation

Saonli Basu

John Burkart

Lynne Carleton

Yanping Chang

Jai & Grace Choi

Timothy Church & Ann Fredrickson

Erjia Cui

Yue Cui

Lynn Eberly & J A. Scherrer

John & Ann Fieberg

Weihua Guan

Brian Hart

Yan Hu

Jinzhou Huang

Xiaohong Huang & Xuan Liu

Janice & Kenneth James

Deborah & Theodore Jewett

Mei Jiang

Gary & Cynthia Johnson

Nidhi Kohli & Eric Lock

Joseph Koopmeiners & Katie Bodeker

Ales Kotalik

Karla Larsen & Kenneth Bearman

An Liu & Lee Han

Xianghua Luo & Hongfei Guo

Medtronic Foundation

Craig Meyer

Thomas Murray

James & Linda Neaton

Charissa & Thomas Oliphant

Beth Olson

Wei Pan & Yahui Li

Ashley Petersen

Jiaoming Qiu & Pei Li

Harrison Quick

J. Sunil Rao & Darlene Rebello-Rao

George Reed

Yanan Ren

Kyle Rudser & Annalisa Eckman Rudser

Sandra Safo

Ryan Shanley

Judith Smith & Howard Tomar

Gail Tudor & Daniel Petersen

Wenjuan Wang & Feng Cao

Elizabeth Wegele

Chaohui Yang & Yihua Zhao

Qinghui Yuan & Yanping Chang

Paul & Nicole Zantek

Daniel Zelterman

Angelique L. Zeringue

Lin Zhang

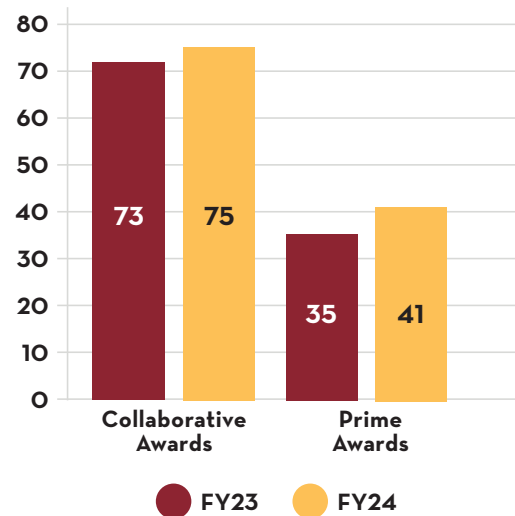Xueying & Hui Zhang

Tingting Zhao

Research Highlights

Grant Activity

In fiscal year 2024 (FY24), the division brought in $34.8 million in grant awards from a total of 116 prime and collaborative grant awards.
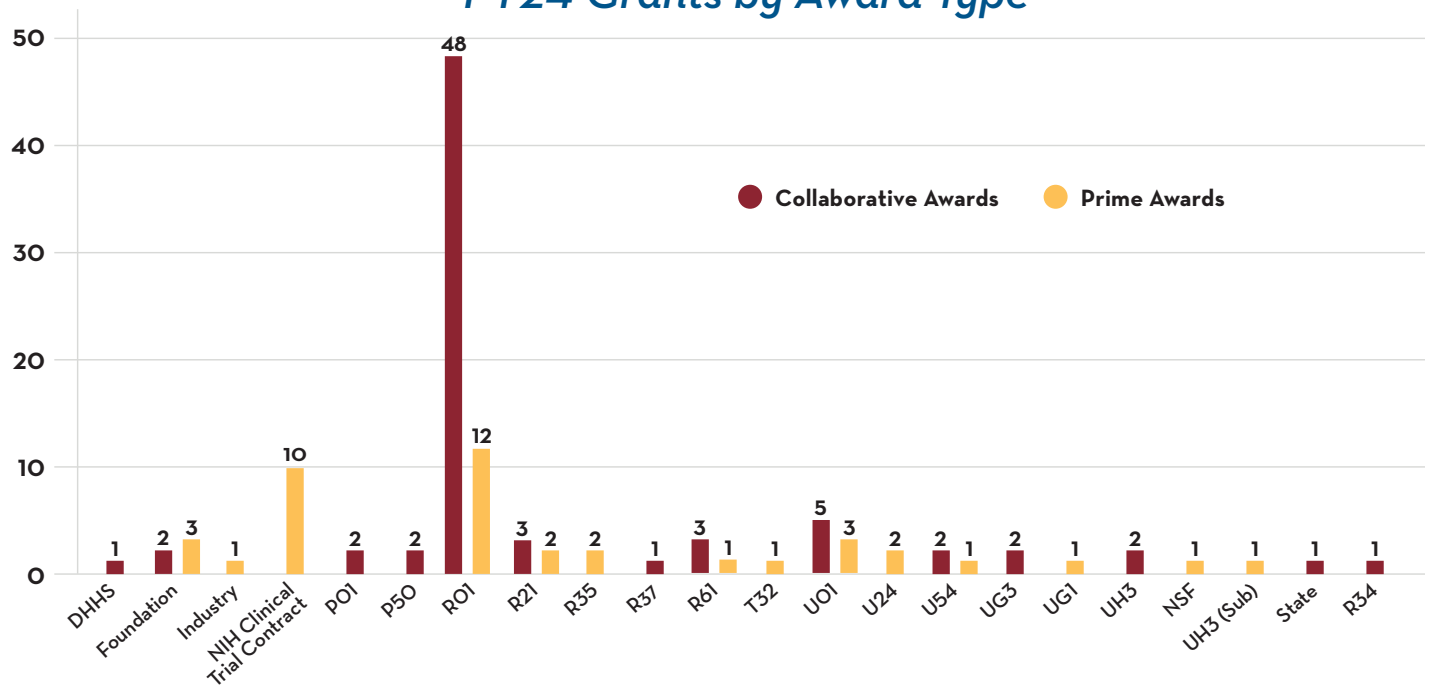
Total Grant Dollars Awarded

	FY23 Total Awarded $	FY24 Total Awarded $
Prime Awards	$16,946,736	$29,527,320
Collaborative Awards	$3,760,545	$5,289,631

● Collaborative Awards ● Prime Awards

Number of Grants Awarded

	FY23	FY24
Collaborative Awards	73	75
Prime Awards	35	41

● FY23 ● FY24

FY24 Grants by Award Type

● Collaborative Awards ● Prime Awards

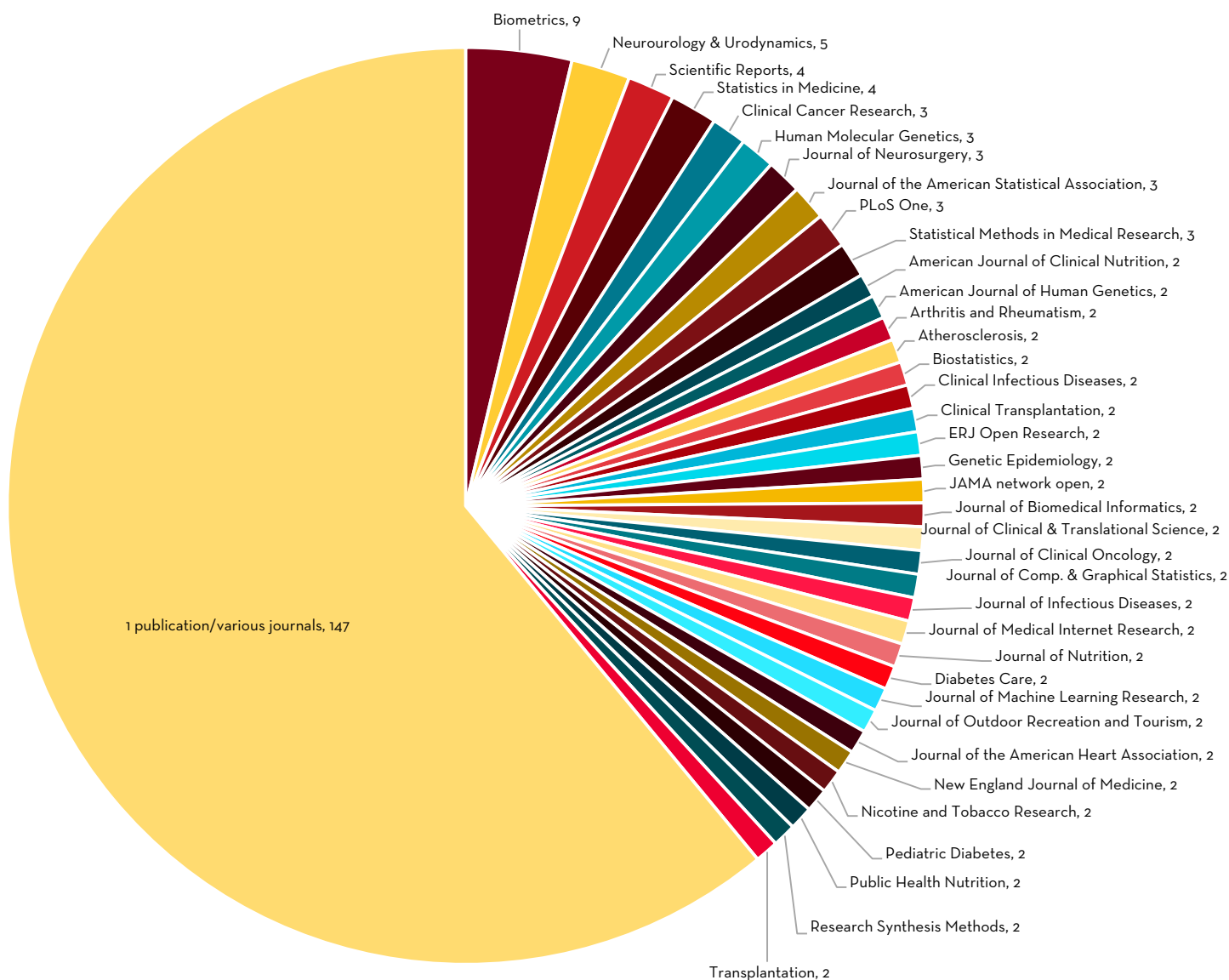| Award Type	Collaborative	Prime
DHHS		1
Foundation	2	3
Industry	1	
NIH Clinical Trial Contract		10
P01	2	
P50	2	
R01	48	12
R21	3	2
R35	2	
R37	1	
R61	3	1
T32	1	
U01	5	3
U24	2	
U54	2	1
UG3	2	
UG1	1	
UH3	2	
NSF	1	
UH3 (Sub)	1	
State	1	
R34	1	

Research Highlights

Publications

In calendar year 2023, our division faculty continued to be productive in publishing their research with a total of 238 published journal articles.

Faculty Publications 2023
238 Publications Total

Biometrics, 9

Neurourology & Urodynamics, 5

Scientific Reports, 4

Statistics in Medicine, 4

Clinical Cancer Research, 3

Human Molecular Genetics, 3

Journal of Neurosurgery, 3

Journal of the American Statistical Association, 3

PLoS One, 3

Statistical Methods in Medical Research, 3

American Journal of Clinical Nutrition, 2

American Journal of Human Genetics, 2

Arthritis and Rheumatism, 2

Atherosclerosis, 2

Biostatistics, 2

Clinical Infectious Diseases, 2

Clinical Transplantation, 2

ERJ Open Research, 2

Genetic Epidemiology, 2

JAMA network open, 2

Journal of Biomedical Informatics, 2

Journal of Clinical & Translational Science, 2

Journal of Clinical Oncology, 2

Journal of Comp. & Graphical Statistics, 2

Journal of Infectious Diseases, 2

Journal of Medical Internet Research, 2

Journal of Nutrition, 2

Diabetes Care, 2

Journal of Machine Learning Research, 2

Journal of Outdoor Recreation and Tourism, 2

Journal of the American Heart Association, 2

New England Journal of Medicine, 2

Nicotine and Tobacco Research, 2

Pediatric Diabetes, 2

Public Health Nutrition, 2

Research Synthesis Methods, 2

Transplantation, 2

1 publication/various journals, 147

Research Highlights

Multi-omics Data Integration

In September 2023, Thierry Chekouo, Assistant Professor, received a five-year R35 grant from NIH for his project, Interpretable Bayesian Non-linear Statistical Learning Models for Multi-Omics Data Integration. Multi-omics integration analysis assists with creating a better understanding of the underlying biological mechanisms and heterogeneity in complex diseases such as cardiovascular diseases, cancer, and neurodegenerative disorders. Through this project, Dr. Chekouo will develop and apply integrative and nonlinear Bayesian methods that leverage the rich information in data from multiple omics types to identify biological predictive pathways, important driver biomarkers and clinically molecular disease subtypes that contribute to the association between omics data types. Through the application of the proposed methods to diverse complex disease datasets, they aim to provide new data that will enable the assessment of diagnosis and personalized treatment strategies.

Improving Heterogeneous Effect Estimation

In February 2024, Jared Huling, MPI, along with fellow MPI Amir Asiaeetaheri, PhD, Vanderbilt University Medical Center, received a $1,059,541 PCORI grant for their project, Improving Heterogeneous Effect Estimation by Integration of Experimental and Observational Studies. This study aims to combine data from both randomized controlled trials (RCTs) and observational studies to improve personalized treatment decisions.

They are developing new methods to estimate how treatment effects vary with patient characteristics more accurately. Their approach involves merging data from RCTs, which have strong scientific validity but often limited sample sizes, with data from large observational studies to improve power while mitigating bias present in observational studies. This will help the team better understand how treatments work for different people, leading to more effective and personalized care.

New Research Areas

Harrison Quick, Associate Professor, joined our division in July 2023 and brought new research to the division in the areas of spatial statistics and data privacy, which is funded by grants from the NIH and NSF. Dr. Quick's primary research focus is the development and application of Bayesian statistical models for the analysis of spatial and spatiotemporal data. From a methodological standpoint, his recent work in this area has focused on the analysis of multidimensional spatial data. This work has directly led to applications in data privacy, spatial epidemiology and collaborations within the division, at Drexel's Urban Health Collaborative, with colleagues at the Centers for Disease Control and Prevention, and with the Philadelphia Department of Public Health.

Data Science Initiative Grants

The University of Minnesota Data Science Initiative (DSI) awarded its first round of seed grants in December 2023. BHDS faculty received 4 of the 12 large and medium seed grants awarded by the DSI, highlighting our position as data science leaders at the University of Minnesota. The following BHDS faculty received DSI one-year seed grants:

- **Jue Hou:** Data Science Methods to Enable Real-world Evidence for Supporting Stroke Care (DRESS)
- **Harrison Quick:** Creating a Synthetic Vital Statistics Data Repository for Minnesota
- **Steffen Ventz:** Robust Bayesian Transfer Learning
- **Lin Zhang** and **Joe Koopmeiners:** Development of Novel Statistical Imaging Partitioning Tools for Interpretable Lesion-Wise Cancer Detection Using 3D Prostate Imaging Data

Student Awards

Division of Biostatistics and Health Data Science Student Awards
The following students were recognized during the 2023-2024 academic year.

Jacob E. Bearman Student Achievement Award
The Bearman Award, presented annually in recognition of outstanding academic and professional achievement, is given in honor of Jacob "Pete" Bearman. Dr. Bearman was a faculty member in the Division from 1953 to 1978, headed the Division from 1956 to 1965, and was a pioneer in clinical trials methods and conduct. Dr. Bearman passed away in 2005.

The 2023-2024 recipient was:
Solvejg Wastvedt
Solvejg Wastvedt completed her PhD degree in March, 2024. Julian Wolfson and Jared Huling were her dissertation advisors. Solvejg is a statistician at NORC at the University of Chicago.

James R. Boen Graduate Award
The James R. Boen Graduate Award was established in honor of retired Biostatistics Professor James R. Boen. Dr. Boen specialized in the art of statistical consulting. This award recognizes biostatistics students whose achievements are strongest in applied biostatistics. Dr. Boen passed away in 2007.

The 2023-2024 recipient was:
Justin Clark
Justin Clark completed his PhD during summer 2024 with Jared Huling and Jim Hodges as his dissertation advisors. After graduation, Justin is working as an Associate in the Health Economics and Outcomes Research practice at Analysis Group in Los Angeles, California.

Student Awards

Sharon Ling Community Engagement Award

This award, established in 2022, annually recognizes a graduate student in the School of Public Health Division of Biostatistics and Health Data Science, for their exemplary character and commendable contributions to their community, either within the Division, School, University or broader Twin Cities community.

This award was established in honor of Sharon Ling, a biostatistics PhD student who significantly enhanced the lives of her community through her teaching, public health research, volunteerism, and involvement in a variety of university organizations.

The 2024 recipient was:
Michelle Leeberg

Michelle is a PhD student working with Tom Murray and Xianghua Luo as her dissertation advisors. Michelle is an active leader in the Division of Biostatistics and Health Data Science. Michelle plans to complete her PhD in December 2024.

Biostatistics Research Assistant Award

The Biostatistics Research Assistant Award recognizes outstanding work as a research assistant and acknowledges contribution to the Division's statistical methods and collaborative research mission.

The 2023-2024 recipients were:
Andres Arguedas Leiva, Chloe Falke, & Jiayi Hu
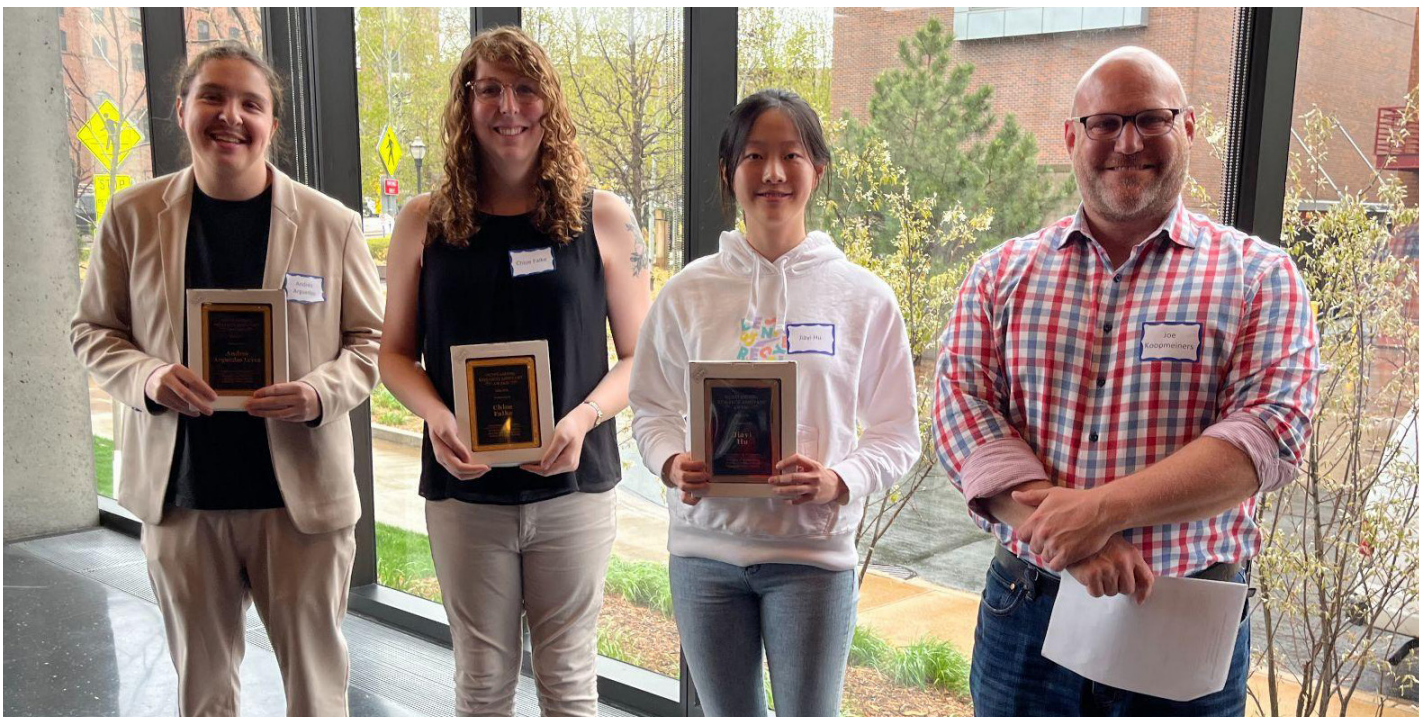
Student Awards

Biostatistics Teaching Assistant Award

The Biostatistics Teaching Assistant Award recognizes outstanding service as a teaching assistant and acknowledges contributions to the Division's educational mission.

The 2023-2024 recipients were:

Leif Verace, David McGowan, Michael Anderson, & Bhargob Kakoty

Delta Omega

Delta Omega is an honorary society for graduate studies in public health. Delta Omega celebrates excellent academic achievement, devotion to public health principles, and outstanding service in public health.

The 2023-2024 recipients were:

Emma Billmeyer, Michala Carlson, Kollin Rott, & Yang Xie

Student Poster Awards

Best poster by a Student in their 1st or 2nd year
Elzbieta Jodlowska-Siewert
"Prediction of Time to Moderate Progression in MCI Patients using Integrated-omics Datasets"

Best Poster by a Student in their 3rd year or higher
Michelle Leeberg
"A Bayesian Win Probability Approach for Clinical Trials with Survival Outcomes"

Audience Favorite Student Poster Award
Jack Wolf
"Leveraging Information from Secondary Endpoints to Enhance Dynamic Borrowing Across Subpopulations"

Student Awards

Regional/National and University of Minnesota Student Award Recipients

Congratulations to the following students who won awards at regional and national conferences or from the University of Minnesota.

Student(s)	Organization	Award
Michael Anderson, Josey Sorenson, Bhargob Kakoty & Cheng-Chang Wu*	Computational Models of Immunity - Pertussis Boost (CMI-PB)	2nd CMI-PB Prediction Challenge: 1st Place
Rui Cao	University of Minnesota	Doctoral Dissertation Fellowship
Souradipto Ghosh Dastidar	Association for Clinical and Translational Statisticians (ACTStat)	2024 Student Award
Jiayi Hu	ENAR	2024 Distinguished Student Paper Award
Jiayi Hu and Can Zhang*	Carlson School of Management, University of Minnesota	Interdisciplinary Health Data Competition: 1st Place
Ziren Jiang	ENAR	2024 Distinguished Student Paper Award
Esteban Lemus Wirtz	School of Public Health, University of Minnesota	SPH Research Day Poster Competition: People's Choice Award
Kollin Rott	ENAR	2024 Distinguished Student Paper Award
Jack Wolf and Zuofu Huang	American Statistical Association, Twin Cities Chapter	Poster Competition: People's Choice Award
Can Zhang	American Statistical Association, Twin Cities Chapter	Poster Competition: Graduate Award

*Winning teams also featured members of BHDS faculty and/or non-BHDS students

Degrees Granted

Degrees were conferred from July 2023 through June 2024.

Doctor of Philosophy (PhD)

Michael Anderson
Methods for Supervised Machine Learning and Polygenic Risk Scores
(Advisors: Weihua Guan and Saonli Basu)

Jessica Butts
Methods for Integrative Analysis and Prediction Accounting for Subgroup Heterogeneity
(Advisors: Lynn Eberly and Sandra Safo)

Wenhao Cao
Research Synthesis Methodology for Normative Data and Genetic Data
(Advisors: Eric Lock and Haitao Chu)

Lillian Haine
Bayesian Methods for the Incorporation of Real World Data into the Design and Analysis of Randomized Controlled Trials
(Advisors: Joe Koopmeiners and Tom Murray)

Ziyu Ji
Bayesian Dynamic Data Borrowing Methodologies for Source-Specific Inference
(Advisors: Baolin Wu and Julian Wolfson)

Jonathan Kim
Bayesian Modeling of Multi-Source Multi-Way Data
(Advisor: Eric Lock)

Sydney Porter
Innovations in Dose-Finding Designs using Bayesian Methods
(Advisors: Tom Murray and Anne Eaton)

Zheng Wang
Innovative Multivariate Meta-Analyses Methods for Diagnostic Tests and Multiple Treatments
(Advisors: John Connett and Haitao Chu)

Solvejg Wastvedt
Fairness Estimation for Small and Intersecting Subgroups in Clinical Application
(Advisors: Julian Wolfson and Jared Huling)

Master of Science (MS)

Emma Billmyer
Yixun Chen
Rachel Cho
Kody DeGolier
Zhirui Deng
Jessica Hellner
Jiayi Hu
Ziren Jiang
Elzbieta Jodlowska-Siewert
Esteban Lemus Wirtz
Jialing Liu

David McGowan
Denis Ostroushko
Neelanzana Paudel
You-Shan Shen
Yansong Wen
Cheng-Chang Wu
Yang Xie
Qingyi Zeng
Bohua Edward Zhai
Can Zhang
Yuntian Zuo

Master of Public Health (MPH) in Public Health Data Science

Luis Silva
Sarah Vadnais
Charly Vang

Students Supported by UMF Funds

During AY2023-2024, the following students received support from UMF Funds within the Division of Biostatistics and Health Data Science provided by our generous donors. Thank you to all the donors who contributed to these funds. Your donations enhanced our educational program support.

Biostatistics Dissertation Fellowship Fund

Andres Arguedas Leiva

Biostatistics Fund

Michael Anderson
Michelle Leeberg
Solvejg Wastvedt

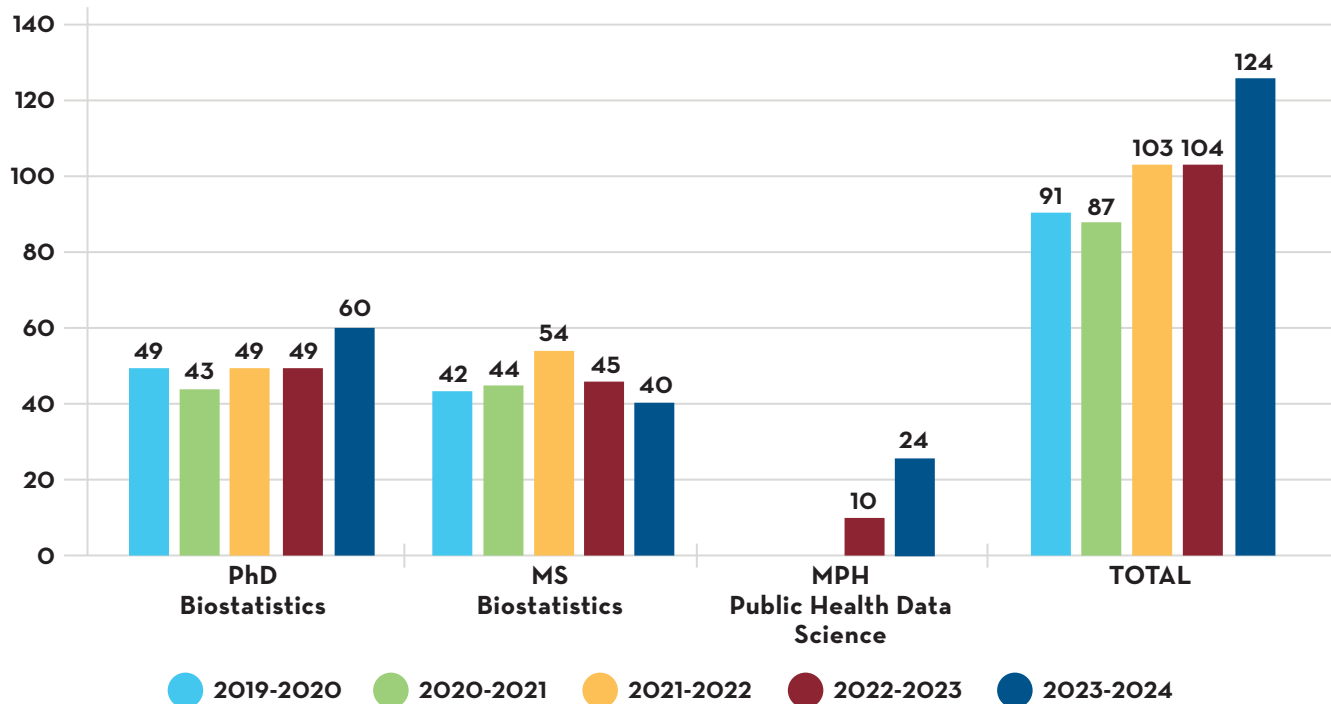### Jacob Bearman Student Achievement Award in Biostats Fund

Andres Arguedas Leiva
Justin Clark
Chloe Falke
Jiayi Hu

Elzbieta Jodlowska-Siewert
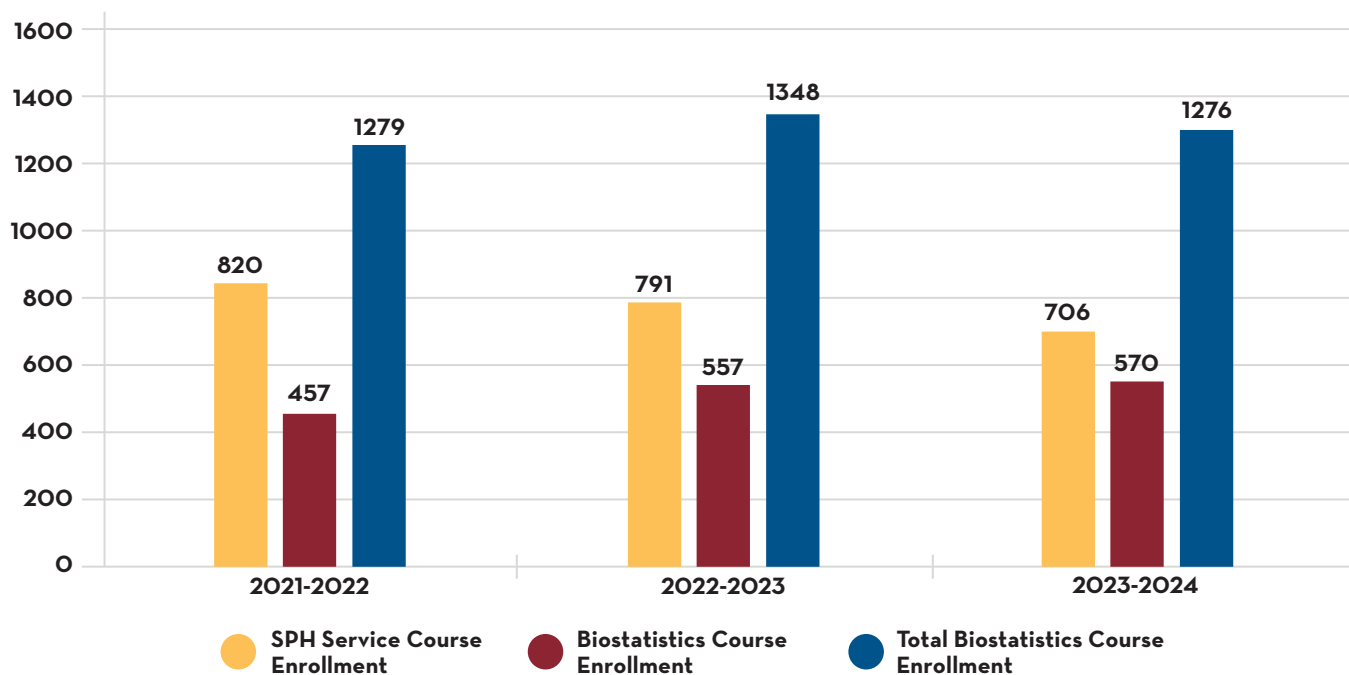Bhargob Kakoty
David McGowan
Leif Verace
Jack Wolf

Jean Roberts Biostatistics Fellowship

Jordan Aron
Aparajita Sur

Student Enrollment in Biostatistics and Health Data Science
Past Five Academic Years

Values by program and academic year:

	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
PhD Biostatistics	49	43	49	49	60
MS Biostatistics	42	44	54	45	40
MPH Public Health Data Science				10	24
TOTAL	91	87	103	104	124

Biostatistics and Health Data Science
Course Enrollment

	2021-2022	2022-2023	2023-2024
SPH Service Course Enrollment	820	791	706
Biostatistics Course Enrollment	457	557	570
Total Biostatistics Course Enrollment	1279	1348	1276

DEI & Outreach Highlights

Statistical Consulting Continues at Coon Rapids High School

The Biostatistics Community Outreach and Engagement (BCOE) committee continued serving as statistical consultants for Coon Rapids High School (CRHS) students carrying out research in a virtual world called the Islands. 2023 marked the fourth year of collaboration with CRHS!

Equitable Data Science for Adolescent Development

In June 2024, the Division of Biostatistics and Health Data Science, in collaboration with the Masonic Institute for the Developing Brain, launched a summer program funded by the National Science Foundation for undergraduate students called *Equitable Data Science for Adolescent Development*.

The program provided ten undergraduate students from across the nation with the opportunity to carry out research in equitable data science, with a focus on adolescent development using data from the Adolescent Brain Cognitive Development (ABCD) Study, the largest ongoing longitudinal student on adolescent development in the U.S.

Divisional Name Change

On October 24, 2023, the Division of Biostatistics officially changed its name to the Division of Biostatistics and Health Data Science (the new acronym is "BHDS").

The new name better captures the full scope of the research and educational offerings within the division. While we remain leaders in clinical trials and our other traditional areas of strength, we currently have people in our division doing tremendous work in biomedical imaging, wearable technology, and mobile health – all areas that fit under the health data science umbrella.

The division has gone through multiple previous names, from Biometry and Informatics, to Biometry, and most recently Biostatistics. This reflects the dynamic nature of the division and our desire to stay on the cutting edge of data-centric research in public health and biomedical research. The current name change continues this tradition.

Years of Service

2024 Years of Service Honorees

Faculty and staff who have worked at the School of Public Health for five or more consecutive years are recognized for their dedication and service to the school at five-year intervals. The school and our division are fortunate to have very committed staff and faculty. Thank you for your service!

5 Years of Service	*20 Years of Service*	*30 Years of Service*	*40 Years of Service*
Becca Mitchell	**Nicole Engen**	**James Hodges**	**Helen Voelker**

Faculty Highlights

Academies for Excellence Inductee

Congratulations to Kyle Rudser who was inducted into the University of Minnesota's Academies for Excellence (Academy for Excellence in Team Science) for his work in discovering treatments that can improve the health of children affected by obesity and obesity-related conditions.
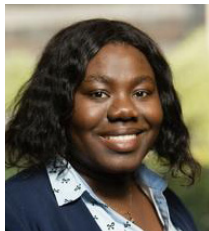
Committee of Presidents of Statistical Societies (COPSS) Emerging Leader Award

Congratulations to Sandra Safo who received a 2024 Committee of Presidents of Statistical Societies (COPSS) Emerging Leader Award for Emerging Leaders in Statistics. This award recognizes early career statistical scientists who show evidence of and potential for leadership and who will help shape and strengthen the field. Sandra was nominated for "significant contributions to statistical and machine learning methods for integrative analysis; for dedication to education and mentoring; and for far-reaching services to profession and society."

Institute of Mathematical Statistics Fellow and V.K. Gupta Endowment Award for Achievements in Statistical Thinking and Practice

Congratulations to **J. Sunil Rao** who was selected as a 2024 Institute of Mathematical Statistics (IMS) Fellow. Each fellow has demonstrated distinction in research in statistics or probability or has demonstrated leadership that has profoundly influenced the field. Sunil was selected for "novel contributions to high-dimensional model selection and mixed model selection, developing new paradigms to modernize mixed model prediction, developing innovative statistical and machine learning methods for analyzing cancer genomic data, and demonstrating significant leadership in the profession."

Sunil also received the Prof. V.K. Gupta Endowment Award for Achievements in Statistical Thinking and Practice. As part of this award, Sunil was an invited speaker at the 26th Annual Conference of the Society of Statistics, Computer and Applications (SSCA) International Conference on Emerging Trends of Statistical Sciences in AI and its Applications (ETSSAA-2024) which was held February 26 - 28, 2024. Sunil's lecture was on "Recent Advances in Mixed Model Prediction."

Faculty Highlights

Promotions
*Congratulations on the achievements of the following faculty who were promoted:*

- **Weihua Guan, PhD** – Promoted to Professor (June 2024)
- **Sandra Safo, PhD** – Promoted to Associate Professor (June 2024)
- **Julian Wolfson, PhD** – Promoted to Professor (June 2024)

New Faculty Hires
Welcome to our newest faculty members!

- **Erjia Cui, PhD** – Assistant Professor (July 2023)
- **Harrison Quick, PhD** – Associate Professor (July 2023)

Faculty Retirement – *Chap Le*
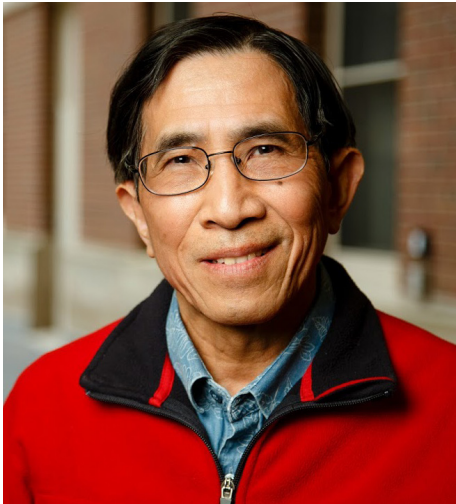
After 45 years at the University of Minnesota, Chap Le retired on January 3, 2024. Chap was recognized at the division faculty meeting in December 2023. Some highlights from Chap's career include:

- Over 200 peer reviewed papers with over 12,000 citations.
- Funded approximately 40 externally funded grants in a wide range of areas, with long-running collaborations in the areas of otitis media and cancer.
- Founding member of the Masonic Cancer Center (MCC) and served in the role of Director of the MCC Biostatistics Core.
- Taught over 80 classes to over 4,000 students and was primary advisor for 50 biostatistics graduate students (MPH/MS/PhD).
- Model of the modern approach to biostatistics, i.e., high impact methods research plus statistical leadership for team science.

We thank Chap for his many contributions to the division and wish him the best on his retirement!

2023-2024 Graduate Faculty Bios

Saonli Basu
Professor of Biostatistics
Adjunct Professor, Statistics,
University of Washington
Co-Director, Analytics Core, The Masonic
Institute for the Developing Brain (MIDB)
Co-Director, Interdisciplinary Biostatistics
Training Program in Genetics and Genomics

M.S., 1998, Statistics, Indian Statistical Institute, Kolkata, India
Ph.D., 2005, Statistics, University of Washington

Saonli Basu's research interests include statistical modeling of high-dimensional data with applications in statistical genetics, imaging genetics and genomics. In particular, she is interested in correlated data, high-dimensional inference, and risk prediction modeling. Her collaborative work addresses statistical issues in identifying genetic and environmental influences on substance abuse in adolescence, childhood cancer, mental health in multi-ethnic populations.

Ann M. Brearley
Associate Professor of Biostatistics

Ph.D., 1986, Chemistry,
University of Minnesota
M.S., 2008, Biostatistics,
University of Minnesota

Ann Brearley divides her time between collaborative research and teaching. She is a member of the Biostatistical Design and Analysis Center (BDAC) of the Clinical and Translational Science Institute (CTSI) where her collaborative research interests include the design, monitoring and analysis of clinical trials, particularly medical research aimed at helping people in low and middle income countries (LMIC). She develops and teaches in-person and online courses in introductory biostatistics, biostatistical literacy, clinical trials, and consulting. Her own research focuses on enabling excellent research to happen, by educating, mentoring, and developing teaching and learning resources for people on both sides of the interface between biostatisticians and public health and medical researchers, including leading the development of the https://biostats4you.umn.edu/ website. She received the Charles N. Hewitt Creative Teaching Award from the University of Minnesota School of Public Health in 2014.

Thierry Chekouo
Assistant Professor of Biostatistics
Ph.D., 2013, Statistics,
University of Montreal

Thierry Chekouo's research interests are in developing new statistical frameworks for analyzing datasets characterized by high dimensionality and complex structures such as high-throughput genomic, epigenomic, transcriptomic, proteomic and imaging data. He has been broadly interested in Bayesian statistical methods, variable selection, clustering and bi-clustering, functional data analysis, and software development. A special focus is on developing integrative Bayesian models combining different sources of data for biomarker discovery and clinical prediction. Those models can take into account prior biological knowledge in order to better predict clinical outcomes.
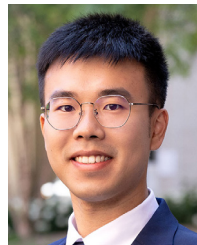
Erjia Cui
Assistant Professor of Biostatistics

Ph.D., 2023, Biostatistics,
Johns Hopkins University

Erjia Cui's research is motivated by the intricate structures of large-scale, high-dimensional data. His methodological research includes advancing Functional Data Analysis methods and creating reproducible software to support them. His research interests also include spatial-temporal modeling, Bayesian statistics, and survival analysis. One direction of his research is to assess the impact of objectively measured physical activity collected from wearable devices on aging, disease progression, and mortality. Additionally, he works collaboratively with researchers on multiple sclerosis and infectious diseases.

2023-2024 Graduate Faculty Bios

Biyue Dai
Assistant Professor of Biostatistics

M.S., 2016, Biostatistics,
University of Iowa
Ph.D., 2019, Biostatistics,
University of Iowa

Biyue Dai is a member of the Coordinating Centers for Biometric Research (CCBR), where she works on several international clinical trials and epidemiological studies related to advanced HIV and HIV-associated meningitis. Her current research activities involve the design, implementation, monitoring and statistical analysis of clinical trials, as well as statistical methods research motivated by data collected through those studies.

Anne Eaton
Assistant Professor of Biostatistics

M.S., 2010, Biostatistics,
University of Minnesota
Ph.D., 2020, Biostatistics,
University of Minnesota

Anne Eaton's research interests include survival analysis, multistate models, and complex censoring and observation processes. She is also interested in clinical trial design and analysis, including dose-finding trials in oncology. She is a member of the Biostatistics Core of the Masonic Cancer Center.

Lynn E. Eberly
Professor of Biostatistics

M.S., 1994, Statistics, Cornell University
Ph.D., 1997, Statistics, Cornell University

Lynn Eberly's current research interests involve methods and applications for multi-modal medical imaging data, such as MRI, diffusion MRI, functional MRI, and MR spectroscopy, any of which may involve clustered, longitudinal, and functional data. She has particular interest in the areas of neurology/neuroscience, psychiatry/psychology, and endocrinology. Lynn is a collaborator on many projects related to imaging

in these areas. She teaches research skills for Biostatistics doctoral students. She was given the Leonard M. Schuman Award for Excellence in Teaching in the School of Public Health in 2002. She is a Fellow of the American Statistical Association and was the inaugural winner of the Biostatistician Mentor of the Year Award in 2016, given by the University's Clinical and Translational Science Institute. Lynn is a member of the inaugural team to be inducted into the University's Academy of Excellence in Team Science, in 2019, for the team's longstanding and impactful research in type I diabetes. Lynn has been the Associate Dean for Faculty Affairs for the School of Public Health since 2020.

Mark Fiecas
Associate Professor of Biostatistics

Ph.D., 2012, Biostatistics, Brown University

Mark Fiecas's methodological research interests include time series analysis, spatio-temporal models, and estimating high-dimensional parameters. He is also interested in neuroimaging studies and imaging genetics. He is actively involved in a number of research projects with the Department of Psychiatry and Behavioral Sciences. He is Co-director of the Analytics Core at the Masonic Institute of the Developing Brain.
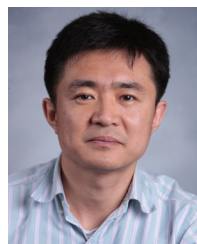
Weihua Guan
Professor of Biostatistics
Director of Graduate Studies

M.S., 2001, Statistics,
Texas A&M University
Ph.D., 2010, Biostatistics,
University of Michigan

Weihua Guan has research interests in statistical genetics, and identification of genes involved in complex diseases and traits, with special interests on developing statistical and analytical methods for the genetic and epigenetic data using new high-throughput technologies.

2023-2024 Graduate Faculty Bios

Erika Helgeson
Associate Professor of Biostatistics

Ph.D., 2017, Biostatistics,
University of North Carolina

Erika Helgeson's research interests include clinical trials, statistical machine learning, and risk prediction. She works in a variety of areas including transplantation, COPD, and oral health.

James S. Hodges
Professor of Biostatistics

M.A., 1986, Public Affairs,
University of Minnesota
Ph.D., 1985, Statistics,
University of Minnesota

Jim Hodges has collaborated with researchers in many areas of health care including endocrinology, dentistry, neurology, infectious diseases, cardiovascular diseases, psychology/psychiatry, cancer, rheumatology, nephrology, and gastroenterology as well as researchers in sociology, demography, marketing, wildlife management, ornithology, horticulture, combat analysis, military logistics, simulation models, and airport safety. His main statistical research area now is causal inference applied specifically to meta-analysis.

Jue (Marquis) Hou
Assistant Professor of Biostatistics

M.S., 2013, Statistics,
University of Illinois at Urbana-Champaign
Ph.D., 2019, Mathematics,
University of California San Diego

 Jue Hou's research interests span across survival analysis, high-dimensional regression and causal inference. His methodological and theoretical research is motivated by the common challenges in mining large biomedical data for precision medicine, including missing/imprecise data, sampling/confounding bias and post model selection

inference. His application research focuses on the risk/prognosis prediction and treatment effect assessment using electronic health records data for a wide range of diseases, including cancers, obesity, type 2 diabetes, multiple sclerosis, and rheumatoid arthritis.

Jared Huling
Assistant Professor of Biostatistics

Ph.D., 2017, Statistics,
University of Wisconsin-Madison

Jared Huling's research interests focus on the development of causal inference, precision medicine, and statistical/machine learning methodology for the analysis of complex observational studies. He is particularly interested in addressing various forms of population and effect heterogeneity with the aim of improving patient health outcomes. His work in this area has involved applications in health system risk modeling, in personalizing health system intervention enrollment decisions, and comparative effectiveness through use of Electronic Medical Records.

Joseph Koopmeiners
Professor of Biostatistics
Division Head

M.S., 2004, Biostatistics,
University of Minnesota
Ph.D., 2009, Biostatistics,
University of Washington

Joe Koopmeiners's research interests include Bayesian methods for clinical trials, causal inference, and biomedical imaging. His statistical methods research is strongly motivated by his collaborations related to cancer research and other areas. Current projects include leading the Biostatistics and Data Management Core for a multi-institution program project in the area of tobacco regulatory science and the development of imaging technology as a diagnostic tool for prostate cancer.

2023-2024 Graduate Faculty Bios
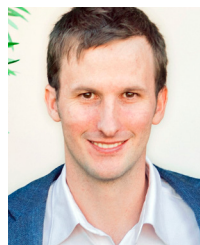
Benjamin Langworthy
Assistant Professor of Biostatistics

Ph.D., 2020, Biostatistics,
University of North Carolina

Ben Langworthy's methodological research interests include competing risks survival analysis, clustered data, and causal inference. He has worked on a wide range of collaborative areas which include oncology, home and community based services for patients with Alzheimer's and related dementias, improving hospital outcomes for high risk patients, and pediatric medicine.

Eric Lock
Associate Professor of Biostatistics

Ph.D., 2012, Statistics,
University of North Carolina

Eric Lock's research concerns the analysis of high-dimensional and complex data, with a focus on applications in genomics and molecular biology. His particular interests include the integration of multi-source data, tensor methods for multi-way data, exploratory factorization and clustering methods, and Bayesian nonparametric inference.

Chap T. Le
Distinguished Professor of Biostatistics

M.A., 1971, Mathematics,
California State University - Fresno
Ph.D., 1978, Statistics,
University of New Mexico

Chap Le has taught PubH 7405 (Biostatistics Inference I) and PubH 7470 (Study Designs in Biomedical Research), both in the fall semesters and short course, PubH 6432 (Selected Topics in Clinical and Translational Research) in the summer. His collaboration has focused on analyses of survival and categorical data from clinical and translational research projects. His methodological research interests include epidemiological methods, crossover designs, survival analysis, logistic regression, correlated binary data, ordered alternatives, ROC curves, the design and analysis of in vitro experiments for studying cancer drugs (chemo combination therapies) and, recently, personalized medicine, ROC curve as applied to survival analysis, ROC curve as applied to propensity scores.

He is the author of many research articles and several textbooks: Fundamentals of Biostatistical Inference (1992), Health and Numbers (1995, 2001, and 2010), Applied Survival Analysis (1997), Applied Categorical Data Analysis (1998), Introductory Biostatistics (2003, 2016 – Second Edition with Lynn Eberly), and Statistics Quick Reference Guide (2007), Categorical Data and Translational Research (2010). See the full list of publications on Google Scholar: https://scholar. google.com/citations?hl=en&user=1C3d6y8AAAAJ&view_op=list_works&sortby=pubdate

Xianghua Luo
Professor of Biostatistics

M.S., 2000, Quaternary Geology,
Peking University
Ph.D., 2005, Biostatistics,
Johns Hopkins University

Xianghua Luo's research interests include methods and applications for recurrent event data, survival data, and longitudinal data; design and analysis of clinical trials. Collaborations include cancer research, blood and marrow transplantation (BMT), tobacco use and smoking cessation. She is a member of the Biostatistics Core of the Masonic Cancer Center.

Andy Mugglin
Research Associate Professor of Biostatistics

Ph.D., 1999, Biostatistics, University of Minnesota

Andy Mugglin's research interests include clinical trials, Bayesian, adaptive, and other innovative clinical trial designs; Bayesian hierarchical modeling, spatio-temporal modeling, and computing. He also consults extensively in clinical study design for the medical device and pharmaceutical industries and serves on Data Monitoring Committees for various ongoing clinical trials.

2023-2024 Graduate Faculty Bios

Thomas Murray
Associate Professor of Biostatistics

M.S., 2011, Biostatistics,
University of Minnesota
Ph.D., 2014, Biostatistics,
University of Minnesota

Thomas Murray's methodological research is motivated by his collaborative work in clinical trials. His interests include Bayesian adaptive designs for early phase clinical trials, methods for leveraging real-world data to improve efficiency of randomized clinical trials, and design considerations and analysis methods for personalized decision-making using data from randomized clinical trials. The latter includes methods for developing adaptive treatment strategies using data from sequential multiple assignment randomized trials. He has collaborated in the applied areas of cardiology, nephrology, neurology, oncology and infectious disease.
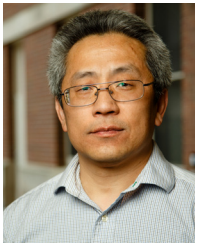
Wei Pan
Professor of Biostatistics

M.S., 1995, Statistics,
University of Wisconsin, Madison
Ph.D., 1997, Statistics,
University of Wisconsin, Madison

Wei Pan has research interests in statistical genomics and genetics, neuroimaging data analysis, machine learning and data mining. He has taught courses on survival analysis, categorical data analysis, linear models and generalized linear models, microarray data analysis, statistical learning and data mining.

Ashley Petersen
Associate Professor of Biostatistics

Ph.D., 2016, Biostatistics,
University of Washington

Ashley Petersen's research focuses on pedagogical innovations in statistics education and collaborative research in ovarian cancer screening, tobacco prevention and cessation, dentistry, and

other areas of public health and medicine. She has developed methods within the area of statistical learning and now focuses on the application of these. She is a member of the Biostatistics Core of the Masonic Cancer Center, where she collaborates with investigators on a range of applications.

Harrison Quick
Associate Professor of Biostatistics

M.S., 2010, Biostatistics, University of Minnesota
Ph.D., 2013, Biostatistics, University of Minnesota

Harrison Quick's research focuses on Bayesian methods for the analysis of spatial and spatiotemporal data and applications in data privacy. Much of his research involves collaborating with experts from federal, state, and local health departments to investigate geographic and racial/ethnic disparities in public health outcomes and explore ways to expand access to public health data while preserving the privacy of the underlying data subjects.

J. Sunil Rao
Professor of Biostatistics
Director of Biostatistics,
Masonic Cancer Center

M.S., 1991, Biostatistics,
University of Minnesota
Ph.D., 1994, Biostatistics,
University of Toronto

J. Sunil Rao's research focuses on developing new statistical methods for modeling complex data that can cover a range of possibilities from cancer genomics to contextual data and health disparity estimation. This has included work on high dimensional modeling, mixed model prediction, model selection, small area estimation, bump/mode hunting, and active information.

2023-2024 Graduate Faculty Bios

Cavan Reilly
Professor of Biostatistics

M.A., 1995, Economics,
New School for Social Research
M.A., 1996, Statistics, Columbia University
Ph.D., 2000, Statistics, Columbia University

Cavan Reilly has research interests in a variety of areas including clinical trials and in the clinical application of high dimensional biological assays. He primarily works on problems in infectious diseases including COVID-19, Ebola virus disease, and HIV/AIDS.

Kyle Rudser
Professor of Biostatistics

M.S., 2005, Biostatistics,
University of Washington
Ph.D., 2007, Biostatistics,
University of Washington

Kyle Rudser's research interests include the design, monitoring, and analysis of clinical trials, survival analysis, longitudinal analysis, and nonparametric approaches. He is Director of the Biostatistical Design and Analysis Center (BDAC), a group that is part of the Clinical and Translational Science Institute (CTSI), which is involved in a wide variety of collaborative projects with clinical and translational science investigators throughout the Schools of Medicine, Nursing, Dentistry, and Public Health and Colleges of Pharmacy and Veterinary Medicine. He also leads the Scientific and Data Coordinating Center for the Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium and the biostatistical support for the Center for Pediatric Obesity Medicine in the Department of Pediatrics.

Sandra Safo
Associate Professor of Biostatistics

Ph.D., 2014, Statistics,
University of Georgia

Sandra Safo is interested in developing supervised and unsupervised statistical and machine learning methods for data integration, classification, clustering, and prediction with applications to HIV, chronic obstructive pulmonary disease (COPD), cardiovascular disease (CVD), and other complex diseases.

Lianne Siegel
Assistant Professor of Biostatistics

Ph.D., 2021, Biostatistics,
University of Minnesota

Lianne Siegel's methodological research interests include multivariate and network meta-analysis, and the design and analysis of clinical trials. She is especially interested in individual participant data meta-analysis and the design and analysis of pragmatic clinical trials, including cluster randomized trials. She is currently supporting trials assessing interventions related to COVID-19 and traumatic brain injury.

Steffen Ventz
Assistant Professor of Biostatistics

M.Phil., 2010, Statistics, Bocconi University, Milan, Italy
Ph.D., 2013, Statistics, Bocconi University, Milan, Italy

Steffen Ventz's methodological research interests include Bayesian statistics, statistical decision theory and optimal design of sequential experiments, response adaptive clinical trial designs, meta-analyses, transfer- and federate-learning. His applied research focuses on oncology, infectious diseases, and comparative effectiveness research.

2023-2024 Graduate Faculty Bios

David Vock
Associate Professor of Biostatistics

M.Stat., 2009, Statistics,
North Carolina State University
Ph.D., 2012, Statistics,
North Carolina State University

David Vock develops methods for in causal inference — a set of statistical tools used to determine the effect of an intervention from observational data – and dynamic treatment regimes, which are used to evaluate and advance personalized treatment strategies. Much of his methodological work has been motivated by applications in organ transplantation, regulatory tobacco science, and oncology. He is an expert in the design and analysis of sequential multiple assignment randomized trials, a type of trial design to study dynamic treatment regimes, and currently serves as the lead statistician for four SMARTs including trials to test adaptive treatment strategies in pediatric obesity, smoking cessation, and adolescent depression.

Caitlin Ward
Assistant Professor of Biostatistics

M.S., 2018, Biostatistics, University of Iowa
Ph.D., 2021, Biostatistics, University of Iowa

Caitlin Ward's methodological research focuses on the development of Bayesian models in settings with complex or correlated data, such as infectious disease epidemiology, spatial analysis of cancer cell imaging data, and spatio-temporal disease mapping. She is also interested in improving computational techniques for implementing these methods. She collaborates across a wide array of disciplines, including nursing, oncology, environmental health, and veterinary medicine.

Julian Wolfson
Professor of Biostatistics

Ph.D., 2009, Biostatistics,
University of Washington

Julian Wolfson's research interests include causal inference and statistical machine learning for complex data. He applies causal inference methods to understand the biological pathways underlying treatment and discover surrogate endpoints. He develops statistical machine learning tools for making predictions from complex datasets, including large-scale electronic health record data and sensor data from mobile devices. He is also a consulting statistician for several ongoing clinical trials.

Tianzhong Yang
Assistant Professor of Biostatistics

M.P.H, 2012, Biostatistics and Epidemiology, Boston University
Ph.D., 2018, Biostatistics, University of Texas Health Science Center at Houston

Tianzhong Yang's research interest lies in genetic epidemiology and statistical genetics. She has been working on methodology development related to gene-by-environment interaction analysis, high-dimensional mediation analysis, multiple-trait analysis, and integrative analysis of omics data. She is also a member of the Childhood Cancer Genomics Group, where she collaborates to study pediatric cancer etiology and outcome.
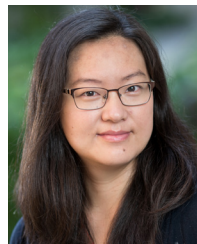
Lin Zhang
Associate Professor of Biostatistics

M.S., 2007, Biology, Texas A&M University
Ph.D., 2012, Statistics, Texas A&M University

Lin Zhang's primary research interest is methodology development for high-dimensional medical imaging and genetic data analysis. Her research covers spatial and spatiotemporal modeling, functional data analysis, graphical modeling, and Bayesian feature selection.

2023-2024 Instructors

Laura Le
Senior Lecturer, Biostatistics

M.S., 2008, Statistics,
University of Minnesota
Ph.D., 2017, Statistics Education,
University of Minnesota

Laura Le teaches several biostatistical service courses, both in-person and online, including PubH 6414 (Biostatistical Literacy), PubH 6450 (Biostatistics I), PubH 6451 (Biostatistics II), and PubH 7461 (Exploring and Visualizing Data in R). She received a B.A. degree in Mathematics and Statistics from Luther College and finished her Ph.D. in Educational Psychology, specializing in Statistics Education, from the University of Minnesota, Twin Cities. She is passionate about researching how students learn statistics in order to improve the teaching of statistics.

Marta Shore
Lecturer, Biostatistics

M.S., 2007, Statistics,
University of Minnesota

Marta Shore began her career in biomedical research. But she soon realized that data analysis was her favorite part of her job, so she decided to go back to school in statistics. After finishing her master's degree in statistics in 2007, she took a job as an adjunct instructor in the School of Statistics. She taught part or full time from 2008-2015, and was an undergraduate academic adviser from 2012-2015. While teaching, she had the opportunity to perform analyses on survey data, including surveys of learning styles. In 2015, she took a position as a statistician for the Minnesota Pollution Control Agency. At this agency, she was able to perform analyses to help determine water quality standards, monitor water quality, improve water quality monitoring, predict solid waste production, and determine mercury risk in schools. She returned to teaching in 2017 and continues to consult on survey analysis. In addition to teaching introductory biostatistics courses to non-biostatisticians, she currently also serves as the co-chair of the Biostatistics Community Outreach and Engagement (BCOE) committee. She also helps coordinate the SPH Mental Health Advocates group and is the co-chair of the University of Minnesota's Women's Faculty Cabinet. In 2023, she won the President's Award for Outstanding Service.

2023-2024 AffiliateGraduate Faculty Bios
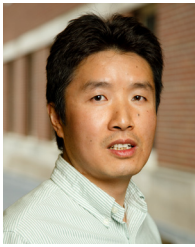
Haitao Chu
Professor of Biostatistics

M.D., 1995, Preventive Medicine,
West China University of Medical Sciences
M.S., 2002, Biostatistics, Emory University
Ph.D., 2003, Biostatistics, Emory University

Haitao Chu's research interests include: evidence-based medicine; meta-analysis; precision medicine; epidemiology methods; latent class models; statistical methods for mismeasured, missing, and correlated data; statistical methods for survival and longitudinal data; statistical methods for observational studies and randomized clinical trials; and applied Bayesian methods. His application research interests focus on infectious diseases, cancer, cardiovascular disease and injury prevention.

Mariza de Andrade
Adjunct Professor

Mayo Clinic Cancer Center
Professor of Biostatistics
Mayo Clinic College of Medicine

M.Sc., 1978, Statistics, Institute of Pure and Applied Mathematics, Rio de Janeiro, Brazil
M.Sc., 1988, Biostatistics, University of Washington, Seattle, WA
Ph.D., 1990, Biostatistics, University of Washington, Seattle, WA

Mariza de Andrade's research interests include admixture mapping, and methods for diagnostic, longitudinal and multivariate traits for linkage analysis of quantitative phenotypes using variance components approach, and extending these methods for association studies using family and population-based data. Mariza is also involved in a wide range of genome-wide association studies using family and case-control designs for complex disorders from various networks: Genes. Environment Association. Studies (GENEVA), Cohorts for Heart & Aging Research in Genomic Epidemiology (CHARGE), Electronic Medical Records & Genomics (eMERGE), Genetic Epidemiology Network of Atherosclerosis (GENOA), and Genetic Epidemiology of Lung Cancer Consortium (GELCC). She is an active collaborator

with various investigators at Mayo Clinic, the Universities of Michigan and Cincinnati, MD Anderson Cancer Center in Houston, TX, and University of Sao Paulo, Sao Paulo, Brazil.

Sue Duval
Affiliate Professor of Biostatistics

Ph.D., 1999, Biostatistics, University of Colorado Health Sciences Center

Statistical methods in epidemiology, meta-analysis methods and their applications, publication bias, evidence-based healthcare, systematic review methods, resuscitation medicine, peripheral artery disease and cardiovascular disease epidemiology.

Birgit Grund
Professor of Statistics

M.S., 1982, Math/Statistics, Humboldt-Universität (Berlin)
Ph.D., 1987, Math/Statistics, Humboldt-Universität (Berlin)

Birgit Grund has research interests in the design, conduct and analysis of clinical trials, with applications in AIDS research and COVID-19 treatment trials.

Tim Hanson
Affiliate Professor of Biostatistics

M.A., Mathematics, 1996,
University of New Mexico
Ph.D., Statistics, 2000,
University of California, Davis

Tim Hanson's methodological research includes Bayesian nonparametric models, adaptive RCT design, spatiotemporal survival analysis, diagnostic screening without a gold standard & ROC models, semiparametric mixed models, models incorporating moment constraints, causal inference, missing data, competing risks & multi-state models, and hierarchical mixture models. Tim is strongly motivated by real problems and data.

2023-2024 AffiliateGraduate Faculty Bios

Theodore Lystig
Adjunct Assistant Professor
of Biostatistics

M.S., 1998, Biostatistics,
University of Washington
Ph.D., 2001, Biostatistics,
University of Washington

Ted Lystig's research interests include design and analysis of clinical trials for medical devices, active surveillance, signal detection, evidence synthesis, multiple testing, statistical genetics, goodness of fit for longitudinal data, and hidden Markov models.

Richard F. MacLehose
Professor of Epidemiology and
Community Health

Ph.D., 2005, Epidemiology,
University of North Carolina
at Chapel Hill

Richard MacLehose is an epidemiologic methodologist. He collaborates on a range of applied research ranging from cardiovascular to cancer epidemiology. His methodological research focuses on uses of Bayesian methods and development of methods for quantitative bias analysis in epidemiologic research.

Sumithra Mandrekar
Adjunct Professor
Professor of Biostatistics
College of Medicine, Mayo Clinic

Ph.D., 2002, Interdisciplinary – Statistics,
Psychology, Internal Medicine and
Biomedical Engineering,
The Ohio State University

Sumithra Mandrekar is Professor of Biostatistics and Oncology at Mayo Clinic, Rochester MN, and is the Group Statistician for the Alliance for Clinical Trials in Oncology. She is widely recognized for significant contributions to the statistical methodology for the design, conduct and analysis of clinical trials, particularly in oncology; for leadership in clinical trials and data management coordination at Mayo Clinic and the Alliance for Clinical Trials in Oncology; for leadership on national and international steering committees and advisory panels related to cancer, including the National Cancer Institute Clinical and Translational Advisory Committee (CTAC). She is a fellow and past president of the Society for Clinical Trials. Her primary research interests include adaptive dose-finding early phase trial designs, designs for predictive biomarker validation, and general clinical trial methodology related to conduct of clinical trials and identification of alternative cancer clinical trial endpoints.

David Nelson
Adjunct Assistant Professor
Associate Professor of Medicine
Senior Statistician, Center for Chronic
Disease Outcomes Research
Minneapolis VA Medical Center

M.S., 1994, Statistics, University of Minnesota
Ph.D., 1998, Statistics, University of Minnesota

David Nelson is developing methods for inference in observational studies and model diagnostics using sufficiency and propensity theory. He also is interested in stepwise Bayesian methods for finite population sampling and nonparametric statistical analysis.

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