

Newsletter of Academic Year 2024-2025

Founded in 1935, GW's Department of Statistics was the first statistics department in a College of Arts and Sciences in the United States. Since then, the department has continually produced high quality research in both theoretical and applied areas of statistics and probability. The department offers both M.S. and Ph.D. programs of full-time and part-time enrollments. The great location of being in the heart of Washington, D.C. gives students unique access to the research and employment opportunities in the major government agencies and private companies and connection with the distinguished statisticians from the local Washington Statistical Society.

Message from the Editors

Dear PhD students,

We are happy to present the Academic Year 2024-2025 newsletter to you. There are many exciting opportunities taking place this fall, both on and off campus, within the DMV area or around the world!

We hope every student will have an enriched and great experience in the statistics department and we all become better and stronger as a whole community.

Thank you, we hope you find the Newsletter informative.

Zixuan Zhao and Yipeng Wei (Editor/Co-Chair of PhD Student Committee)

Conferences and Workshops

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Statistics Conferences

Some international and area statistical conferences will take place soon. Students are encouraged to attend these conferences.

- Joint Statistical Meetings (JSM) 2025 will be held in Nashville, Tennessee, USA, from August 2–7, 2025. JSM is one of the largest statistical gatherings in the world, bringing together professionals from academia, industry, and government to discuss the latest advancements in statistical methodology and application. The conference will feature invited sessions, poster presentations, and professional networking events. Registration opens May 1, 2025. Online registration will remain open through the end of the conference
- The 2025 ICSA Applied Statistics Symposium will be held June 15-18 in the University of Connecticut, Storrs, Connecticut. This will be the 34th annual symposium hosted by the International Chinese Statistical Association (ICSA). The theme of this year's conference is Insights into Complexity: Empowering Policy through Statistical Learning and Data Analytics. The symposium will feature short courses, invited sessions, and poster presentations, as well as opportunities for networking and recruiting. KO ο λογος αναρωπων
- > Duke Industry Statistics Symposium (DISS) 2025 will be held in Durham, North Carolina, USA, from April 9–11, 2025. The theme for this year's symposium is "Driving Clinical Research Forward with Advanced Statistics and Data Innovations: Biostatistics in the Age of AI/ML." The event will delve into the cutting-edge realms of biostatistics and data innovations within pharmaceutical development, particularly in the context of artificial intelligence (AI) and machine learning (ML). The symposium will start with a day of short courses, followed by keynote addresses, parallel sessions, and dynamic poster lightning talks. -----2000000-
- Annual ASA/IMS Spring Research Conference (SRC) on Statistics in Industry and Technology will be held in New York, NY, USA, from June 3–5, 2025. Sponsored by the American Statistical Association (ASA) Section on Physical and Engineering Sciences (SPES) and the Institute of Mathematical Statistics (IMS), this conference focuses on modern statistical methods, data science, machine learning, and AI applications in industrial and technological settings. Historically emphasizing industrial statistics, design of experiments, quality, and reliability, the conference now highlights emerging methodologies and practical applications across diverse scientific and engineering domains. Student scholarships will be available for selected graduate students submitting contributed papers.

- Triangle Symposium on Statistics and Data Science (TSSDS) 2025 will be held in Raleigh, North Carolina, USA, from May 12–13, 2025. Hosted at North Carolina State University in collaboration with Duke University and UNC Chapel Hill, this symposium aims to promote and foster intense interaction among researchers working in Statistics and related fields by providing a platform to address modern statistics and data science's foundational, theoretical, methodological and computational challenges.
- 14th International Conference on Bayesian Nonparametrics (BNP 14) will be held in Los Angeles, California, USA, from June 23–27, 2025. This bi-annual event, organized by the Bayesian Nonparametrics section of the International Society for Bayesian Analysis (ISBA), brings together leading experts and emerging researchers in Bayesian nonparametric statistics. The conference provides a platform for exchanging ideas and advancing methodologies in nonparametric Bayesian statistics.

Local Conferences

There will also be local conferences held in the DMV area. Please find the information below and consider attending.

- The International Conference on Statistics and Data Science (ICSDS 25) will be held in Washington, DC, USA, from May 13–14, 2025. This event will bring together professionals, academicians, and practitioners to discuss advancements, future directions, and emerging trends in statistics and data science.
- The International Conference on Artificial Intelligence and Mathematics (ICAIM 25) will be held in Washington, DC, USA, from May 14–15, 2025. This hybrid event will serve as a forum for researchers, scientists, academicians, policymakers, and industry experts to share their expertise and insights. ICAIM 25 will provide an exceptional platform for knowledge exchange, networking, and collaboration across multiple disciplines. Attendees will have the opportunity to participate in stimulating discussions, present research, and engage with thought leaders in AI and mathematics.
- The International Conference on Economics, Statistics, and Mathematics (ICESM 25) will be held on May 22–23, 2025, in Washington, DC, USA. Organized by the International Institute of Education, Research and Development (IIERD), this hybrid event (in-person and virtual) aims to bring together professionals, academicians, and practitioners to discuss advancements and trends in these fields.

Upcoming Career Events and on-campus opportunities

Career Events <u>Linkedin Profile Optimization</u> Wed, Mar 26, 4 PM-5 PM EDT <u>AWS Support Engineering Campus Visit</u> Wed, Mar 19, 4 PM-5:30 PM EDT Avoiding Job Scams Thu, Mar 20, 4 PM-5 PM EDT <u>Interview With Ease</u> Wed, Apr 2, 5 PM-6 PM EDT <u>2025 JPMorganChase Virtual Freshman Focus - Session 1</u> Wed, Mar 19, 3 PM-5:30 PM EDT <u>Seamless Salary Negotiation</u> Tue, Apr 8, 12 PM-1 PM EDT

For more career events, please see <u>https://careerservices.gwu.edu/graduate-student-career-series</u> and <u>https://gwu.joinhandshake.com/stu/events?collection=ALL&eventFormat=HYBRID</u> <u>&sort=RELEVANCE&date=ALL</u>

On-campus Events

CCAS Research Showcase

April 2nd 2025, 10 am-2:30 pm, University Student Center, 3rd Floor Ballrooms

The 2025 CCAS Research Showcase will take place on April 2nd 2025. The Research Showcase provides an opportunity for all Graduate and Undergraduate students and all postdocs in CCAS programs to present their research and scholarship in a poster session. Everyone from CCAS, students, postdocs, staff and faculty alike, are encouraged to come to the Showcase in the third-floor ballrooms of the University Student Center to learn about the fascinating and impactful work of our excellent students and postdocs and their research mentors. Spring 2025 CCAS PhD ETD Workshop II

Mar 6, 2025 03:00 PM

Learn more about the ETD submission process, formatting requirements, and upcoming deadlines for CCAS Ph.D. students. Students planning to defend in the Spring semester are strongly advised to attend this workshop. This is a repeat session. If you attended the session on February 5, there is no need to attend this session.

Completing Your Degree in Spring 2025

If you are completing your graduate certificate, Master's degree or Doctoral degree requirements in Spring 2025, you must apply to graduate for Spring 2025. If you have not already applied, you can do so through GWeb. Instructions can be found on the <u>Office of the Registrar's website</u>. If you wish to participate in commencement/celebration activities in May 2025, then you must apply no later than March 14, 2025. To ensure there are no delays or issues, we strongly recommend that you apply much earlier than the deadline. You may apply for graduation as soon as you are registered. The details of the application deadline can be found <u>here</u>.

If you are completing your degree requirements during the summer semester, but wish to participate in commencement/celebration activities in May 2025, then you must wait until

Summer registration opens on March 24, register for Summer, and then apply for Summer 2025 graduation no later than April 1, 2025. Do not apply for Spring graduation if you do not intend to complete your degree requirements until the summer semester. Doing so will cause delays with your graduation clearance process.

Funding opportunities for Current Graduate Students

Columbian College graduate students may be eligible to apply for additional funding opportunities that support research or academic activities. Interested students are invited to review the eligibility requirements and deadlines for each award. For information about graduate student assistantships, employment opportunities and more, visit the <u>Funding for</u> <u>Prospective Students</u> page.

Statistics Department Events

Statistics Department Seminars

Confirmed departmental Seminars

• Feb 2 2-3pm at Duques 151: Jingshen Wang, University of California Berkeley. Topic: Adaptive designs toward learning treatment heterogeneity.

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- Feb 17 2-3pm at Duques 151: Yaakov Malinovsky, University of Maryland, Baltimore County. Topic: Negative dependence notions and tournament scores.
- Apr 12 2-3pm at Duques 151: Zhuoran Yang, Yale University. Topic: Reinforcement learning meets bilevel optimization: learning leader-follower games with sample efficiency.
- Apr 19 2-3pm at Duques 151: Masayo Hirose, Kyushu University. Topic: Small area estimation under arc-sin transformed area level model.
- Sep 13 2-3pm at Duques 151: Advancing health disparity research.
- Oct 18 2-3pm at Duques 151: Statistical approaches to addressing data science challenges in epigenetic aging research.
- Oct 25 2-3pm at Duques 151: Rentian Yao, The university of British Columbia. Topic: Optimization over the probability space via KL divergence gradient descent: Theory and application in statistics.
- Nov 1 2-3pm at Duques 151: Annie Qu, University of California, Irvine. Topic: Stageaware learning for dynamic treatments.

ASA student chapter events

The ASA student chapter is a student organization in the statistics department run by current Stat PhD and master students. It provides a platform for all students who are interested in Statistics to connect with each other. Events including info sessions, alumni career panel, data mining clubs will be held to help members with both professional development and academic research. Please stay tuned for the upcoming events! (Home - GWU ASA Student Chapter)

Ph.D. Student Committee event

Graduate seminar series: The Grad Seminar is a presentation series arranged by and for graduate students at GW, where students will take turns to deliver talks. These talks may cover a broad spectrum of subjects and are not necessarily limited to one's own research. This seminar seeks to foster a casual environment in which graduate students can acquire skills in delivering technical presentations and get exposed to new challenges in statistics/mathematics. Here's the arrangement for this year:

- Jan 26 4-5pm at Rome 771: Jilei Lin. Smoothed quantile regression for analyzing spatial data over complex domains.
- Feb 2 4-5pm at Rome 771: Zexin Ren. Causal inference under network interference.
- Feb 16 4-5pm at Rome 771: Muzhe Guo. Bayesian iterative prediction and lexical-based interpretation for disturbed sentence pair matching.
- Mar 1 4-5pm at Rome 771: Weixiao Dai. Subgroup analysis in clinical trials based on the desirability outcome ranking.
- Mar 29 4-5pm at Rome 771: Ziji Qin. A review of re-randomization method and comparison.
- Apr 12 4-5pm at Rome 771: Yiwei Tang. High-dimensional extreme quantile regression.
- Apr 19 4-5pm at Rome 771: Conglong Xu (Phd student in GW math department). Gradient descent methods on Riemannian Manifolds and their applications in weighted low rank approximation problems.
- Aug 30 4-5pm at Rome 771: Zixuan Zhao. Deep learning for partially linear cox models.
- Sep 13 4-5pm at Rome 771: Jilei Lin. Communication -efficient statistical inference.
- Sep 27 4-5pm at Rome 771: Zexin Ren. Causal inference on distribution functions.
- Oct 18 4-5pm at Rome 730: Canyi Chen (Postdoc at University of Michigan). Quantile mediation analytics.
- Nov 1 4-5pm at Rome 771: Juntao Su. Explainability in Deep learning.
- Nov 16 4-5pm at Rome 771: Yaqi Wu. Gromov-Wasserstein optimal transport: application driven variants, statistics and gradient flow.
- Dec 7 4-5pm at Rome 730: Yipeng Wei. Predicting individual risk of advanced adenoma based on the interval censored recurrent event and informative screening time.

For more information and a list of past presentations, see <u>GW Hu's Group - Activities</u>.

George's STAT day 2024: This year's George's stat day is a one-day event, led by Professor Subrata Kundu, that brings together top researchers across the DMV region to foster collaboration and innovation in statistics, data science and related disciplines. Census Director Robert Santos will deliver the keynote address, "How a 'Community-of-the Whole' Approach Informs Our Road to the 2030 Census." The event will be jointly organized with the Department of Biostatistics and Bioinformatics at GW and the Department of Statistics, George Mason University. <u>Georges' STAT DAY 2024</u> | Department of Statistics | Columbian College of Arts & Sciences | The George Washington University

Statistics in the Age of AI: Professor Xiaoke Zhang receives a \$18,400 NSF award to partially support the conference 'Statistics in the age of AI', which will be hosted at GW. The conference will feature two short courses, seven talk sessions, one poster session and two panel discussions. Statisticians from various backgrounds will not only demonstrate the cutting-edge advances of

statistics in the AI landscape, but also will have in-depth discussions on the future of statistical research, education and practice in the era of AI. <u>Statistics in the Age of AI | Department of Statistics | Columbian College of Arts & Sciences | The George Washington University</u>

Kudos & Milestones

Congratulations to the graduating Phd students, Dr. Jiaqian Yu, Dr. Yi Zhang for successfully defending their dissertations this year and getting their Doctoral degree!

The 2024 graduate student teaching prize is awarded to *Guannan Chen*, a fourth year doctoral student at GW. Master student *Yawen Wu* received the 2024 Cornfield award for academic excellence and engagement. Doctoral student *Zexin Ren* received the 2024 Cornfield award for outstanding qualifying exam achievement and doctoral student *Xinyue Zhao* was awarded the 2024 Fritz Sheuren prize for leadership and service. Congratulations to the achievements of graduate students this year!

Voices of recent Graduates: Jiaqian Yu

I am Jiaqian, a recent graduate from the Department of Statistics at The George Washington University in Dec 2024. I sincerely thank the department for its openness and inclusivity, which provided me with the freedom to explore my own path. The department's support allowed me to pursue internships and job opportunities while successfully completing my academic journey. Thanks to this flexibility and encouragement, I was able to land my dream job at Google. I am truly grateful for everything the department has done for me!! I sincerely hope all the future students, whether they choose academia or industry, achieve great success in their own paths. Wishing the department continued growth and excellence!

Voices of recent Graduates: Yi Zhang

I am Yi. The years at GWU passed in a blink. It has been nearly a year since I last walked the corridors of Rome Hall, where I was fortunate to meet caring and supportive mentors, inspiring and lively fellows, and friends who filled every day with joy. Not to mention the cherry blossoms that refresh weary minds, and the museums where reason and imagination meet. To those soon graduating—embrace every moment at GWU, and wish you all the best in the journey ahead.

Faculty & Student Research



Hua Liang is a professor of statistics and biostatistics in the Department of Statistics at GWU. Dr. Liang received his Ph.D. in Mathematical Statistics from the Institute of Systems Science, Chinese Academy of Sciences, in 1992, and his Ph.D. in Statistics from Texas A&M University in 2001. He was an Assistant Professor (2002-2005) at St. Jude Children's Research Hospital, an Associate Professor (2005-2009), and a Professor (2009-2013) at the University of Rochester Medical Center before joining GWU. Dr. Liang has worked on semi-parametric regression, mixed-effects

models for longitudinal data, measurement error models, highdimensional data analysis, functional data analysis, and HIV dynamic models. He has been awarded two RO1 grants, one T32 grant, and

8 < 11

five NSF grants. Professor Liang has collaborated on many biomedical projects. He is a Fellow of ASA, IMS, and the Royal Statistical Society. Dr. Liang has served as an Associate Editor for Biostatistics, Electronic Journal of Statistics, and JASA. He has published two books and over 200 articles. His website is <u>https://statistics.columbian.gwu.edu/hua-liang</u>

Appendix

Social Media Page (please follow us on LinkedIn and Facebook!) GW Department of Statistics linkedin page: <u>https://www.linkedin.com/company/gw-statistics/</u> Statistics Students & Alumni of GWU linkedin group: https://www.linkedin.com/groups/14114113/

GWU STATISTICS faceBook page: https://www.facebook.com/GWU.STAT/



Contact Us

American Statistical Association (ASA) Student Chapter

Students from the GWU Statistics department are actively organizing and participating in statistical events through the <u>GWU ASA Student Chapter</u>. The purpose of the student chapter is to provide students at the George GWU with opportunities to connect with other students interested in statistics and interact with prominent statisticians locally and at national meetings. If you are interested in being an officer or participating in the event, please contact Ziji (Jason) Qin (zqin123@gwu.edu)

Full-time Faculty & Their Research Interests

Tatiyana Apanasovich

Measurement error models, Spatial statistics, Positive definite kernels, Non/Semiparametric regression, Vector valued random fields.

Sudip Bose

Bayesian statistics, Bayesian robustness, Pitman closeness.

Feifang Hu

Adaptive design of clinical trials, Bioinformatics, Biostatistics, Bootstrap methods, Statistical issues in personalized medicine, Statistical methods in financial econometrics, Stochastic process.

Subrata Kundu

Sequential analysis, Density estimation, Software reliability, Hypothesis testing, Nonparametric statistics.

Joshua Landon

Bayesian statistics, Stochastic processes, Markov chain, Monte Carlo methods, Decision analysis, Reliability.

Hua Liang

Partially linear models, High-dimensional semiparametric modeling, Model averaging and model selection, Longitudinal data analysis, Measurement error models, Nonlinear and nonparametric mixed effect models, HIV/ AIDS clinical trial and dynamic modeling.

Reza Modarres

Statistical computing, Multivariate analysis, Environmental statistics, Nonparametric statistics.

Qing Pan

Survival analysis, Recurrent event data, Observational studies, Costs analysis.

Xiaoke Zhang

Functional data analysis, longitudinal data analysis, smoothing, dimension reduction, nonparametric statistics, statistical learning, and neuroimaging.

Srinivasan Balaji

Diffusion processes, Markov chains, Stochastic differential equations and applications.

Joseph L. Gastwirth

Statistics in law and public policy, Robust statistical methods, Grouped data.

Fang Rachel Jin

Deep learning, Natural language processing, Data mining, Machine learning, Social network analysis.

Yinglei Lai

Bioinformatics, Computational biology, Statistical genetics.

Zhaohai Li

Genetic epidemiology, Statistical methods for meta analysis, Empirical Bayes, Methods for clinical trials, Clinical biostatistics.

Hosam M. Mahmoud

Probabilistic analysis of algorithms, Random discrete structures, Analytic probability.

Tapan Nayak

Inference, Prediction, Software reliability, Randomized response design.

Huixia Judy Wang

Quantile regression; Extreme value theory and applications; Bioinformatics; Nonparametric (Semiparametric) regression; Inference; Variable selection; Survival analysis; Longitudinal data analysis; Spatial analysis; Measurement error;

John M. Lachin Biostatistics Epidemiology

Contribute to the Newsletter

We will issue the next Newsletter in Fall 2025. If you would like to contribute to the sections `Research Spotlight` or `Reading Recommendations`, or want to join the editorial team for the Newsletter, please contact Zixuan Zhao (<u>zixuan.zhao@gwu.edu</u>) or Yipeng Wei (<u>yipeng_wei@gwu.edu</u>). Welcome to join us.

