

The Department of Statistics

Fall 2024 Newsletter



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ARTS AND SCIENCES

DEPARTMENT OF STATISTICS

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A Message from the Department Head



Welcome to the 27th issue of our Department Newsletter. The department continues to grow and remain active. Currently, we have 25 tenure and tenure-track faculty members, 2 Assistant Professors in Residence, 3 Lecturers, 6 adjunct faculty members, and 13 faculty members from Allied Health Science, Mathematics, Nursing Instruction and Research, UCHC, Computer Science & Engineering, Ecology and Evolutionary Biology, and Electrical & Computer Engineering, who have affiliated appointments with Statistics. In Fall 2024, we have 84 students enrolled in our graduate program, with 56 receiving financial support, 88 students in MS in Data Science. In our undergraduate programs, we have 148 Statistics majors or double majors, 61 Math-Stat majors or double majors, 24 Statistical Data Science majors (BS), 8 Applied Data Science majors (BA) and 44 Statistics minors.

I would like to welcome Mary Lai Salvana to join the department in December 2023; and Xingche Guo, Trevor Harris, Wenrui Li, and Ying Zhou to join the department in fall 2024 as Assistant Professors. These new additions greatly expand the spectrum of research fields in the department. During the past year (fall 2023-fall 2024), many of our faculty received prestigious awards. Our faculty members continue to be successful to obtain external and internal research grants. A detailed list of our faculty's achievements can be found in the section entitled "Faculty Awards and Achievements" in this newsletter. In 2024, we have 13 PhD students graduated. Our graduate and undergraduate students had continuously received many prestigious awards from various statistical associations and statistical conferences. A list of student awards and recognitions can be found in the section entitled "Student Awards and Achievements" in this newsletter. I am very proud of our students for their outstanding achievements.

I would like to thank Professor Robert Aseltine, Chair, Division of Behavioral Science and Community Health and Director, Center for Public Health and Health Policy, for his continuous sponsor of research collaborations with our faculty and graduate students. I would also like to thank Professor James Grady, Director of Biostatistics, Connecticut Institute for Clinical and Translational Science, for providing financial support and research opportunities to 6 PhD students from the Department of Statistics. We enjoy close research collaboration with School of Nursing, UConn Facilities Operations, UConn Office of Vice President Division of Student Life & Enrollment, and Institute of Materials Science. The Director of the Statistical Consulting Services (SCS), Timothy Moore, has continuously done a great job to lead SCS for another successful and productive year.

During the period of fall 2023 to fall 2024, the department organized or hosted over 8 national and international conferences on UConn Storrs campus, and 2 off-campus conferences. The 30th Distinguished Statistician Colloquium (<https://statistics.uconn.edu/pfizer-colloquium/>) was held on October 2, 2024. We also hosted another very successful UConn Alumni & Friends Luncheon in the 2024 JSM on Wednesday, August 7, 2024 at the Hyatt Regency Portland at the Oregon Convention Center from 12 PM to 2 PM with 52 guests. This year, we have two recipients of the UConn Statistics Department Distinguished Alumni Awards, Tumulesh K. S. Solanky '90 Ph.D and Sudipto Banerjee '20 Ph.D. Dr. Tumulesh delivered the Distinguished Alumni Lecture entitled "Some Issues Related to Implementation and Generalization of the Partition Problem" on November 20, 2024. Dr. Sudipto will visit the Storrs campus in spring 2025 to deliver his Distinguished Alumni Lecture.

The New England Journal of Statistics in Data Science (NEJSDS) was launched in 2023 and NEJSDS is in its second year. Please visit <https://nejds.nestat.org/journal/NEJSDS/issues/> for all published articles. NEJSDS is co-sponsored by CLAS, University of Connecticut. Co-editors-in-chiefs are Min-Ge Xie (University of Rutgers) and myself (UConn). HaiYing Wang serves as the Managing Editor, Haim Bar serves Editor of Software Section, and Elizabeth Schifano serves as Associate of Biomedical Research Section. NEJSDS successfully held the first workshop on "Statistics in Data Science" in January, 2024.

In spring 2025, the Department will undertake the 8-year academic program review. This review would provide us a comprehensive evaluation aimed at sustaining and enhancing the quality, continued excellence, and relevance of our educational offerings. The spring semester in 2025 is going to be very busy for the entire department. In June 2025, the International Chinese Statistical Association (ICSA) Applied Statistics Symposium (<https://symposium2025.icsa.org/>) will be back to Storrs campus after 19 years when UConn hosted this symposium in 2006. Finally, I would like to invite our alumni to come back to visit us in-person and to attend one of the conferences we will host on UConn Storrs campus in 2025. I wish all having a healthy, happy, and successful 2025.

Ming-Hui Chen (ming-hui.chen@uconn.edu)

A Message from The Undergraduate Program Director



Congratulations to all of our recent graduates and to all those graduating this year! I wish them well in their future careers, either as they continue their education in graduate school, or accept jobs in industry or government.

The Department of Statistics is now in its second year of offering the Statistical Data Science major alongside the Mathematics-Statistics major (offered jointly with Mathematics) and Statistics major. We continue to see great interest in all three majors among both current and prospective

students. As of the beginning of Fall 2024, there are over 250 students across the three majors

and 50 Statistics minors at the Storrs campus. All our course offerings remain in high demand, and we are excited to offer two new special topics courses this Spring, Causal Inference and Deep Learning, taught by two of our department's newly hired faculty members.

We remain committed to connecting students with undergraduate research opportunities, internships, career networking events, and other resources. In particular, in partnership with CLAS and UConn Athletics, we are excited to announce the formal launching of the Sports Statistics Experiential Learning Program in Fall 2024. The program provides undergraduate students with the opportunity to gain hands-on experience with sports analytics through UConn athletic teams. Students majoring in Applied Data Analysis, Actuarial Science, Mathematics-Statistics, Statistics, and Statistical Data Science who have met certain STAT or MATH course prerequisites are eligible to apply for these internship positions.

Please visit the department website at www.statistics.uconn.edu for more information about our undergraduate program, and information for prospective majors and minors.

Elizabeth Schifano (elizabeth.schifano@uconn.edu)

A Message from The Graduate Program Director



In this age of big data, statistical knowledge, skills, and way of thinking are becoming increasingly important. Our department's vibrant graduate programs provide excellent learning and research experiences to prepare students for a successful career in statistics and beyond. In addition to the Ph.D. and M.S. programs in Statistics, we have the Professional M.S. program in Biostatistics. We also participate in UConn's M.S. in Data Science program. These programs offer a broad spectrum of modern courses on advanced statistical theories and methodologies, statistical computing, data science, consulting, and exciting "hot" topics in statistics. We have extensive collaborations with faculty members in educational, medical, biological, health and environmental sciences, and our graduate students have the opportunity to be employed as research assistants on many of their funded research projects. Our graduate students are well equipped and are highly sought after by industries and academics.

I am glad that you visit our web pages and highly recommend that you learn more about our graduate programs. For more information, including course offerings, research and other academic activities, news updates, and admissions, please go to the department website: <https://statistics.uconn.edu/>.

Zhiyi Chi (Zhiyi.chi@uconn.edu)

Welcome to Our New Hires

Xingche Guo, Assistant Professor

Xingche.guo@uconn.edu



Xingche Guo joined the Department of Statistics in August as an Assistant Professor. He holds a BS in Statistics from the University of Science and Technology of China and a PhD in Statistics from Iowa State University. Before joining UConn, he was a Postdoctoral Research Scientist in the Department of Biostatistics at Columbia University. Dr. Guo's research interests span reinforcement learning, statistical machine learning, functional data analysis, high-dimensional data analysis, Bayesian computation, and statistical

methods for applications in mental health and neuroscience.

Trevor Harris, Assistant Professor

Zft24002@uconn.edu

Trevor Harris joins UConn after serving as an assistant professor in the Department of Statistics at Texas A&M University. His current research is primarily on the application of deep learning to problems in Climatology and Epidemiology and on developing robust tools for applying deep learning models in scientific contexts. Ongoing work develops analyzes and post-processes climate model output with deep neural networks, tools for granger causality and policy evaluation with differentiable models, forecasts West Nile virus with graph neural networks, and more. Past research includes work in functional data analysis, anomaly detection, change point detection, and robust nonparametric hypothesis testing.



Wenrui Li, Assistant Professor

Wenrui.li@uconn.edu



Wenrui Li joined the Department of Statistics this August as an Assistant Professor. She obtained a BS degree in Statistics from Shandong University, a MS degree in Statistics from the University of Washington, and a PhD degree in Statistics from Boston University. Prior to joining UConn, she was a Postdoctoral Researcher in the Department of Biostatistics, Epidemiology and Informatics at the University of Pennsylvania. Her research interests include high-dimensional data analysis, statistics for network data, causal inference

under interference, and statistical methods for infectious disease transmission and surveillance.

Welcome to Our Visiting Scholars



Lizandra C. Fabio is an Associate Professor in the Department of Statistics at the Federal University of Bahia (UFBA), Brazil. She obtained his Ph.D. in Statistics from the University of São Paulo. Her research interests include generalized linear models (GLMs), generalized linear mixed models for accommodating outlier observations through more flexible distributions than the standard normal, and multivariate regression models derived using a random-effects approach, and high-dimensional count data modeling via composite likelihood. She is currently a visiting scholar in the Department of Statistics at the University of Connecticut, collaborating with Professors Dr. Victor Hugo Lachos and Dr. Dr. Ming-Hui Chen on correlated count data problems.

Jalmar M. F. Carrasco is an Associate Professor in the Department of Statistics at the Federal University of Bahia, Brazil. He obtained his Ph.D. in Statistics from the University of São Paulo. His research interests include generalized linear mixed models, survival analysis, measurement error models, distribution theory, and, more recently, variable selection, high-dimensional statistics, and data science. He is currently a visiting scholar in the Department of Statistics at the University of Connecticut, collaborating with Professors Dr. Victor Hugo Lachos and Dr. Dipak Dey on high-dimensional statistical problems.



Adriane Portela is a Ph.D. student in Statistics at the Interinstitutional Graduate Program in Statistics, a partnership between the University of São Paulo and the Federal University of São Carlos in Brazil. Holds a Bachelor's degree in Statistics from the National School of Statistical Sciences (ENCE). Research interests include Survival and Reliability Analysis, Spatial Statistics, and Applied Statistics in Education. Currently a Visiting Research Scholar in the Department of Statistics at the University of Connecticut under the supervision of Professor Dr. Victor Lachos. Together, they are investigating factors influencing time to dropout or completion in Mathematics, Physics, and Statistics programs within the Brazilian higher education system, using survival models for competing risks in a Bayesian framework.

A Message from the Director of the Statistical Consulting Services



The Statistical Consulting Services (SCS) has had another successful year, Since February 2024, the SCS assisted over 130 full, walk-in and online clients, drawn from across the Storrs and regional campuses, including UConn Health, as well as non-UConn affiliated clients. This semester, the SCS has been staffed by Ph.D. students from the Department of Statistics: Zoe Gibbs, Chaeyeon Yoo, Fusheng Yang, Manjun Yu, Shiyong Xiao, and Boming Chen. M.S. student Shea van Den Broek has also been assisting the SCS with a project from the NEAG School of Education.

Highlights from the past year include Director Tim Moore attending a conference for core facilities in Albany, NY, and presented work on the PMF-SCS analysis pipeline developed in collaboration with Shiyong Xiao, and UConn's PMF facility.

The SCS has continued to be involved with the successful publication of manuscripts over the last year, with 10 papers published so far this year! We have also been actively involved in assisting with numerous grant proposals, and we are excited to see these receive support. One the SCS's external clients, the NY VA, has had grant funded by the Department of Defense, and we look forward to collaborating with them on their important research.

We are also excited to announce that a new Postdoctoral Research Associate will be joining the SCS later this year! We will make a more formal introduction once the details have been finalized. Looking further ahead, Director Tim Moore has been invited to participate in a Statistics in Practice panel at next year's JSM, along with statistical consultants from NC State, Virginia Tech, and The Military College of South Carolina. He looks forward to bumping into many of you in Nashville!

Timothy Moore (timothy.e.moore@uconn.edu)

Undergraduate Student News



Our “Data Huskies” team (Sana Gupta, Mathew Chandy, Isabelle Perez, Joshua Lee, Lucy Liu) won the award for Best Data Visualization at the 2024 DataFest challenge held at Wesleyan University.

The Joint Statistics Club

As the new President of the Joint Statistical Club, I’m excited to continue fostering a community of undergraduate students passionate about statistics. Our E-Board this year consists of Vice President Joshua Lee (UG Senior), Treasurer Joann Jun (UG Junior), Secretary Kaya Dua (UG Junior), Public Relations Coordinator Sia Gbondo (UG Sophomore), and Service Chair Vlad Lagutin (UG Sophomore). We also have the indispensable support of graduate students such as Sana Gupta (Ph.D. student) and Wenhao Ruan (Master’s student). This year, we hope to continue growing our club and bringing more opportunities to our members. Our club currently has over 80 registered members, including students in statistics, computer science, business, mathematics, and engineering.

The Joint Statistical Club’s mission is to connect undergraduate and graduate students interested in statistics through social events, workshops, and community engagement. We are affiliated with the American Statistical Association as an official student chapter. Our club meets biweekly to discuss internship and research opportunities, career planning, and skills development. In the Fall 2024 semester, we have led a resume workshop, an R programming workshop, and invited a speaker to discuss non-clinical statistics at Pfizer.

The Joint Statistical Club has been invaluable to my personal growth as an undergraduate statistics student. It has connected me with amazing students on campus, including both undergraduate and graduate students, as well as faculty and professionals. Our club provides a space to ask questions about the field of statistics and offers resources to support each student’s goals. As a sophomore, I’m excited to continue improving our club in the future. On behalf of the whole E-Board, we look forward to organizing more events and opportunities for our members in the coming Spring 2024 semester.

Lucy Liu (lucy.liu@uconn.edu)

Graduate Student News

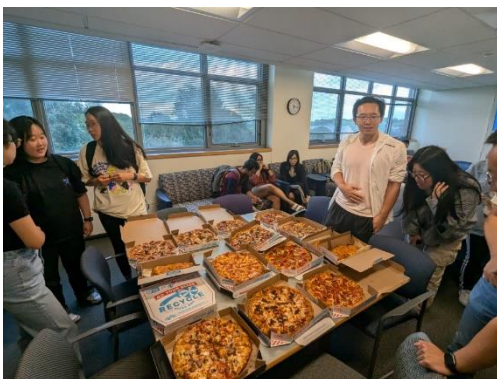
The Graduate Student Committee – Statistics is and always will be a group focused on the needs of the graduate students of the Department of Statistics and serving as a liaison between the students and the faculty and staff. 2024 has been particularly fruitful year: 14 new PhD students and 6 new master's students joined the department. The GSC has been hard at work making sure that every new student feels welcomed and ensuring the continued wellbeing of current students.

We wasted no time getting things started with a gathering in the lounge room 326 immediately after the department orientation on August 28. Around 30 students joined in not only to try the various styles of pizza on offer but also to get to know the various faces of the department, both new and old.

The post-orientation pizza gathering was also immediately followed by our annual Ice Cream – Ice Breaking event on August 30. While celebrating the end of the week and savoring the Dairy Bar's numerous ice cream flavors, students were also able to build on the interpersonal connections that they had made two days prior.

These contributions are made possible in large part thanks to the members of the Graduate Student Committee – Statistics: President Max Sun, Vice President Min Lin, Secretary Sana Gupta, and Treasurer Zhe Guan. We are happy to have been of service so far and look forward to planning more events in the coming semester. Now that everyone is a little more acquainted with each other, we hope to shift our focus to the educational workshops that we were able to hold last year or a potential book club where students can meet to both hangout but also discuss some practical topics of interest.

As we look forward to another year of innovation and connection, the GSC remains committed to enriching the academic and social fabric of our department. Join us in this exciting journey as we continue to break new ground and build a supportive, inclusive community for all our graduate students.



Max Sun (max.sun@uconn.edu)

NEJSDS Workshop on Statistics in Data Science

The [New England Journal of Statistics in Data Science \(NEJSDS\)](#) is the official journal of the [New England Statistical Society \(NESS\)](#), with the aim to serve as an interface between statistics and other disciplines in data science, to encourage researchers to exchange innovative ideas, and to promote data science methods to the general scientific community.

The [NEJSDS](#) Workshop on Statistics in Data Science is a one-day event that features a keynote session, two invited sessions, and concludes with an editorial board meeting.

The first workshop was held on Friday, January 26, 2024, in a hybrid format. The in-person location was in Room 101, Lawrence D. McHugh Hall, University of Connecticut, Storrs, CT 06269, and online participation was through Zoom. There were 6 invited speakers, 2 keynote speakers, and 1 editorial board meeting, and 100 participants registered for the workshop.

The workshop started with a welcome remark by Kolaczyk, President of NESS, and was followed by two keynote speakers, Rong Chen and Ofer Harel. The first invited session was held in the morning with three invited talks by Haim Bar, Jeffrey Miller, and Gavino Puggioni. The second invited session was held in the afternoon, after the lunch break, with three invited talks by Yang Feng, Weijie Su, and Linjun Zhang. The workshop concluded with an editorial board meeting. Below is the detailed schedule of the workshop.

Schedule

- Welcome Remark
 - Kolaczyk, President of NESS, Professor of Statistics at McGill University
 - Keynote session
 - Speaker: Rong Chen, Chair, Department of Statistics, Rutgers University
 - Talk Title: Kronecker Product Approximation for Matrix Approximation, Denoising and Completion
 - Speaker: Ofer Harel, Dean, College of Liberal Arts and Sciences, University of Connecticut
 - Talk Title: Non-inferiority clinical trials: treating margin as missing information
 - Session 1
 - Speaker: Haim Bar, University of Connecticut
 - Talk Title: On Graphical Models and Convex Geometry
 - Speaker: Jeffrey Miller, Harvard University
 - Talk Title: Truth-agnostic diagnostics for calibration under misspecification
 - Speaker: Gavino Puggioni, University of Rhode Island
 - Lunch
 - South dining hall (South Marketplace).
 - Session 2
 - Speaker: Yang Feng, New York University
 - Talk Title: Robust Unsupervised Multi-task and Transfer Learning on Gaussian Mixture Models
 - Speaker: Weijie Su, University of Pennsylvania
 - Talk Title: Navigating the Societal Landscape of Generative AI: Opportunities and Challenges
 - Speaker: Linjun Zhang, Rutgers University
 - Talk Title: Fair conformal prediction and risk control
 - NEJSDS editorial meeting
- More information about the NEJSDS Workshop on Statistics in Data Science is available [here](#).

2024 Inaugural Pharmaceutical Data Science (PharmaDS) Conference

The pharmaceutical industry is experiencing a remarkable transformation powered by data-driven innovation and the rise of Large Language Models (LLMs) and Artificial Intelligence (AI). This new frontier of data science has brought about changes that are reshaping the industry at an unprecedented pace. To address this transformation, the New England Statistical Society, together with the Department of Statistics at the University of Connecticut (UConn), and data science leaders in the industry and academia, created the Pharmaceutical Data Science (PharmaDS) Conference—a unique forum designed to bring together the breadth of expertise driving this shift. Data scientists, statisticians, pharmaceutical professionals, clinical scientists, and students convened on March 18-19, 2024, for this inaugural event hosted by UConn's Department of Statistics.

Themed "Innovate, Illuminate, Lead: Pioneering the Crossroads of AI, Pharma Development, and Data Science," the conference explored the transformative power of emerging technologies across the pharmaceutical spectrum. From research and development to digital health, pharmacovigilance, patient safety, clinical operations, regulatory affairs, and commercialization, the conference highlighted the undeniable impact of technology throughout the pharmaceutical lifecycle. Attendees engaged in discussions that pushed the boundaries of data science applications, showcasing the profound ways in which innovation and cross-disciplinary collaboration can address critical challenges in the industry.

One unique aspect of PharmaDS is its comprehensive focus across the data science lifecycle. While emphasizing the enduring importance of clinical trials and inferential statistics, PharmaDS also explored data science's expanding influence across all pharmaceutical functions: from pharmacovigilance and regulatory affairs to marketing, discovery, digital health, and medical devices. Data scientists, statisticians, and industry leaders shared their insights, discussed strategies, and presented the latest innovations in pharma data science. The detailed conference program can be viewed at <https://archive.nestat.org/phds2024/html/program.html>.

PharmaDS 2024 also underscored the importance of student engagement. Students from the Department of Statistics, UConn's MS in Data Science Program, and the UConn Data Science Club participated actively, with recruitment efforts from the FDA and various companies offering valuable networking and career-building experiences. The conference featured about 20 poster presentations by students and industry representatives, with awards sponsored by the ASA Biopharmaceutical Section.

PharmaDS 2024 was co-chaired by Jingjing Ye from BeiGene and Kun Chen from UConn and was generously supported by sponsors including AbbVie, AMGEN, ASA Biopharma Section, BeiGene, ZS, BMS, ICON, Moderna, PROMETRIKA, UConn's MS in Data Science Program, the ASA CT

Chapter, and DahShu. The conference was made possible thanks to the dedicated support of UConn Event & Conference Services (UECS) and numerous student volunteers. Special thanks to Juliet Kapsis, Bruce (Jun) Jin, Min Lin, Xiaohui Yin, and Sana Gupta for their invaluable contributions.

The next PharmaDS conference is tentatively scheduled for April 2025 in New Jersey. For those interested in participating, submitting a project, poster, or abstract, or seeking further information, please email PharmaDS@nestat.org or visit [www.phds.nestat.org](<http://www.phds.nestat.org>).

Kun Chen (kun.chen@uconn.edu)

The 12th Makuch Lecture

The Department of Statistics at the University of Connecticut (UConn) hosted the 2024 Makuch Lecture, featuring an engaging and insightful presentation by Prof. Roderick Little, a leading expert in missing data analysis and model-based survey studies. The lecture, held on April 24 at UConn Statistics Department, brought together students, faculty, and practitioners to discuss Rosenbaum and Rubin's Propensity Score Paper, which has led to a profoundly fundamental and impactful area of research in biostatistics.

Purpose and Honoree

The **Makuch Lecture Series** commenced in 2013 at UConn in honor of our alumnus **Robert Makuch**. He graduated in 1972 from the College of Liberal Arts and Sciences (CLAS) and is now a distinguished biostatistician and professor at Yale University.



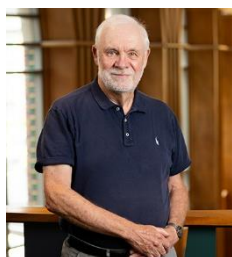
The series was established to recognize the contributions of Dr. Makuch to the field of biostatistics. His expertise extends to statistical and regulatory consultations for the pharmaceutical industry and governmental regulatory agencies. Dr. Makuch is an elected Fellow of ASA, lauded for his statistical consultation and innovative work in clinical trial design and analysis.

Lecture Format

Each year, the Makuch Lecture features a distinguished speaker who shares insights on statistical and biostatistical topics. The lectures cover a wide range of subjects, including methodological advancements, data analysis, and statistical inference. The Makuch Lecture Series serves as a platform for intellectual exchange, fostering collaboration and advancing statistical knowledge.

Year 2024 Speaker

This year marks the 12th Makuch lecture, and the UConn Statistics Department was proud to host Prof. Roderick Little. Dr. Little is the Richard D. Remington Distinguished University Professor of Biostatistics at the University of Michigan. He also holds appointments in the Department of Statistics and the Institute for Social Research at Michigan. He chaired the Biostatistics Department for 11 years. He has over 250 publications, notably on methods for the analysis of data with missing values and model-based survey inference, and the application of statistics to diverse scientific areas, including medicine, demography, economics, psychiatry, aging and the environment. Dr. Little is an elected member of the International Statistical Institute, a Fellow of the American Statistical Association



and the American Academy of Arts and Sciences, and a member of the National Academy of Medicine. In 2005, Dr. Little was awarded ASA's Wilks Medal for research contributions, and he gave the President's Invited Address at the JSM. He was the COPSS Fisher Lecturer at the 2012 JSM.

His talk was titled "Some Reflections on Rosenbaum and Rubin's Propensity Score Paper". The talk was well received by the audience with live discussions. The audience was left with a deeper understanding of the current advancements in biostatistics and the future directions for statistical research.

The Makuch Lecture series continues to serve as a platform for bringing renowned statisticians to UConn, inspiring learning and discussion within the academic community. We look forward to next year's installment and the continued exploration of emerging topics in statistical science.

Revamped 5th UConn Sports Analytics Symposium Showcases Student-Oriented Educational Innovation

Brian Macdonald, Gregory J. Matthews, Jun Yan

The 5th UConn Sports Analytics Symposium (UCSAS) was held on April 12-13, 2024, at the University of Connecticut, drawing 216 registrants, 149 of whom attended in person. This year's symposium, again organized by the Connecticut Statistical Data Science Lab, continued its mission to engage students at various educational levels—from pre-college to graduate—in sports analytics and data science. Revamped and rescheduled from the fall to the spring, the event offered a comprehensive program designed to showcase the field's interdisciplinary impact while fostering collaboration between students, academic programs, and the sports industry.

Opening, Keynote, and Invited Presentations/Panel

The opening remarks were delivered by Ofer Harel, Professor of Statistics Interim Dean of the College of Liberal Arts and Sciences at the University of Connecticut; Andrea Hudy, Director of Sports Performance for Women's Basketball at the University of Connecticut; Elliot Schwartz, Performance Innovation Lead at the U.S. Olympic and Paralympic Committee; and Brian Macdonald, Senior Lecturer and Research Scientist in the Department of Statistics and Data Science at Yale University.

The keynotes started with Esteban Navarro Garaiz, Technical Product Manager at Zelus Analytics, who delivered a keynote presentation titled "Baseball Analytics: Past, Present, and Beyond," offering insights into the evolution of baseball data analysis and its impact on the sport. Kristin Morgan, Assistant Professor of Biomedical Engineering at the University of Connecticut, followed with her presentation on "Interdisciplinary Data-Driven Approach to Improve Player Recovery and Performance," highlighting the convergence of biomechanics, data science, and healthcare in sports analytics.

The final speaker of the symposium was Nathan Chen, Olympic, World, and US Champion figure skater, and a recent graduate from Yale University with a degree in statistics and data science. In his closing keynote presentation, titled "Designing the Optimal Figure Skating Program: Leveraging Data for a Competitive Edge," Chen discussed how data science principles can be applied to create optimal figure skating routines, combining athleticism with statistical precision.

The symposium's panel discussion, "Sport Analytics for Life: Many Different Paths," featured experts from across the sports industry, including Sean Ahmed (Pittsburgh Pirates), Luke Benz (Harvard University), Sean Fischer (Cincinnati Reds), Paul Sabin (The Wharton School), and Emily Wright (Volleyball Canada Beach National Teams). They shared career insights and diverse

perspectives on sports analytics, illustrating the field's vast potential and numerous career paths for aspiring analysts.

UCSAS 2024 also featured four invited sessions that focused on a wide array of critical topics in sports analytics: Athlete Welfare Research from Korey Stringer Institute of UConn; Olympic Sports; Big Data Bowl Finalists; and Sports Analytics Beyond the Field. These sessions provided deep dives into specific issues and innovations, offering participants the opportunity to learn from industry and academic experts.

USOPC Data Challenge and Poster Session

A major highlight of UCSAS 2024 was the US Olympic and Paralympic Committee (USOPC) Data Challenge, facilitated by Dr. Elliot Schwartz, Performance Innovation Lead, USOPC. Over 30 teams submitted solutions aimed at optimizing the USA Olympic Men's and Women's Artistic Gymnastics teams' success for the 2024 Paris Olympics. Six finalist teams presented their work in the symposium's poster session.

The high school/undergraduate division winner was Team Blue Devil Statistics Magicians of Duke University, comprised of Benjamin Thorpe (captain), Sean Li, and Christopher Tsai. In the graduate division, Team David-Siddharth-Abby from Yale University, consisting of David Metrick (captain), Siddharth Chandrappa, and Abby Spears, took top honors.

The Student Poster Session attracted a wide range of submissions, particularly from pre-college, undergraduate, and graduate students. Most student presenters received travel support from the National Science Foundation to attend the symposium. The Student Poster Award Winners were Min Sung Choi of Yonsei University, for his analysis of NBA players' passing and playmaking skills, and Adam Slivinsky of the University of California, Santa Cruz, for his work on evaluating MLB umpire performance using statistical neural networks.

Both the USOPC Data Challenge and Student Poster Award were evaluated by large judging teams, composed of industry professionals, academic experts, and seasoned practitioners, ensuring that the assessments were rigorous and diverse.

Hands-On Training Workshops

A key feature of UCSAS 2024 was its emphasis on student engagement through hands-on workshops. This year, six out of the seven workshops were led by UConn students, five of whom were undergraduates from the UConn Data Science Club, further exemplifying UCSAS's commitment to fostering a learning environment driven by student leadership. The workshops were:

Introduction to R (Fusheng Yang); Introduction to Python (Charitarth Chugh); Analysis of Formula 1 Data with Python (Abhiram Gunt); Basketball Analytics (Mathew Chandy); Web Scraping for Sports Data (Tyler Hinrichs); TensorFlow in Sports Analytics (Hari Patchigolla); and Causal Inference in Sports Analytics (Dr. Kevin Cummiskey). These sessions covered a range of topics and

skill levels, from beginner to advanced, ensuring all participants had an opportunity to enhance their knowledge in sports analytics.

Recordings of these workshops and selected presentations are available on the YouTube channel of the Connecticut Data Science Lab (<https://www.youtube.com/@ctdatasciencelab>).

Looking Ahead to 2025: A New Era for the Symposium

Starting in 2025, the event will be renamed the Connecticut Sports Analytics Symposium (CSAS) to reflect its broader focus and rotation of host institutions. The 6th Connecticut Sports Analytics Symposium (CSAS) will take place on April 11-12, 2025, at Yale University.

The 2025 USAS Data Challenge focuses on analyzing data on bat speed and swing length to explore pitcher/batter interactions in Major League Baseball. The challenge, which is open to students only, provides an excellent opportunity for participants to apply their analytical skills in a real-world sports context. Faculty and students are encouraged to incorporate the data challenge into their Fall 2024 statistics or data science coursework.

Registration for the challenge is open until December 1, 2024, and the submission deadline is January 15, 2025. Finalists will be notified by February 15, 2025. More details can be found on the official event website: <https://statds.org/events/csas2025/challenge.html>.

For those interested in joining the data challenge/poster judging team or sponsoring the event, please contact Brian Macdonald (brian.macdonald@yale.edu).



From left to right: Ankith Nagabandi, Jun Yan, Nathan Chen, Sofia Rebelo, Lucy Liu, Joann Jun, Sana Gupta, David Li, Hari Patchigolla, Leon Nguyen, Alex Hill, Mathew Chandy, Kristin Morgan, Sean Ahmed, Sean Fischer, Gregory Matthews, Brian Macdonald.

Acknowledgements

The Organizing Committee consisted of Brian Macdonald, Senior Lecturer and Research Scientist in the Department of Statistics and Data Science at Yale University; Gregory J. Matthews, Associate Professor of Statistics at Loyola University Chicago and a UConn alumnus (Ph.D. 2011); and Jun Yan (Chair), Professor of UConn Statistics. We extend our heartfelt gratitude to the dedicated volunteers who made the UCSAS 2024 a success.

The invaluable contributions of the Web Support Committee, led by Zefang Min (Graduate Student) and Yelie Yuan (Ph.D., 2023), helped maintain a seamless online experience.

Our undergraduate volunteers played crucial roles across various domains:

- Promotion: Leon Nguyen (Lead) and Emma Griffin
- Audio/Video Support: Ankith Nagabandi (Lead) and Hari Patchigolla
- Supplies Management: Mathew Chandy (Lead) and Hari Patchigolla
- Registration: Jaden Astle (Lead), with support from Mathew Chandy, Kaya Dua, Sia Gbondo, Emma Griffin, Sana Gupta, Alex Hill, Joann Jun, Joshua Lee, David Li, Lucy Liu, Leon Nguyen, Pratham Patel
- Poster Setup: Lucy Liu (Lead) and Sia Gbondo
- Schedule Enforcing: Sofia Rebelo (Lead), Ankith Nagabandi, and Hari Patchigolla

A special thank you to our staff members, Tracy Burke and Courtney Trzasko, whose support was invaluable throughout the symposium. We are also grateful to the volunteers who assisted with the data challenge judging and student poster judging committees, whose expertise and time contributed greatly to the event's impact.

Thank you all for your dedication and hard work in making UCSAS 2024 a memorable and successful event.



**where Oncology and Statistics
meet, communicate, and synergize!**

The 7th Stat4onc Annual Symposium

May 8-11, 2024

The Stat4Onc Annual Symposium is a venue for interdisciplinary dialogue among clinical and quantitative scientists about cancer clinical trials. We seek participation by researchers from academia, industry, and regulatory agencies to share new research, discuss novel ideas, ask questions, and provide solutions for cancer clinical trials. Topics for this symposium include training for new generation of statisticians and clinicians, translational and precision oncology, master protocols, pediatric oncology research and drug development, populational cancer research, biomarkers and subgroups, real world data/evidence, and engagement of under-representative population in oncology research. We want to thank to the NCI's support to this conference through an NCI R13 grant award. The organizers are Ying Lu (Stanford University), Yuan Ji (University of Chicago), Shivaani Kummar (Oregon Health & Science University), Ming-Hui Chen (University of Connecticut), and Byung Park (Oregon Health & Science University).

The main conference of the 7th Stat4Onc symposium was held in Science I building on May 9-10, 2024 and the short courses were offered in McHugh and Science 1 buildings on May 8 and 11, 2024, respectively, on UConn Storrs campus. The conference banquet was held in the Alumni Center in the evening of May 9, 2024. This year's symposium featured two keynote sessions with esteemed speakers Professor Shein-Chung Chow (Duke University School of Medicine) and Dr. Vivek Subbiah (Chief, Early-Phase Drug Development at Sarah Cannon Research Institute). They presented "Novel Design and Analysis for Rare Oncology Drug Development" and "Transforming Healthcare with Basket Trials and Patient-Centric Tissue-agnostic Precision Medicine: A Visionary Approach". Dr. Anthony D'Amico (the Eleanor Theresa Walters Distinguished Chair, Chief of Genitourinary Radiation Oncology at Dana-Farber Cancer Institute, Brigham and Women's Hospital) delivered a banquet speech on "Partnership in Medicine and Biostatistics as the basis for improving the curability of prostate cancer". Professor Ofer Harel (Dean of CLAS at University of Connecticut) and Dr. Margaret K Callahan (Chief of the division of Hematology and Oncology, Neag Cancer Center, UCHC) delivered the opening remarks in the morning of May 9, 2024.

The 7th Stat4onc symposium showcased 6 invited sessions, covering the top trending topics on oncology such as "Big Data and AI in Oncology Research", "Novel Strategies for Dose Optimization in Oncology", "Integration of EHR and Other External Data in the Analysis of Clinical Trials", "Novel Design and Analysis for Rare Oncology Drug Development", "Harnessing the Power of Real

World Data (RWD) to Advance Cancer Care and Treatment”, and “Overall Survival in Oncology Clinical Trials”. The panelists and speakers of these sessions were clinicians and statisticians from research hospitals, universities, medical schools, industry companies, NIH/NCI, and FDA. This year, 4 full-day and 2 half-day short courses were offered on May 8 and 11, 2024, respectively. The topics of these short courses included “Dose Finding in Clinical Development”, “Bayesian Designs of Clinical Trials Using Historical Data: From Theory to Practice”, “AI for Clinical Trials: Emulation, Design, Matching, and Q&A Tools”, “Miscellaneous topics on Randomized Clinical Trials: Surrogate Marker Evaluation and Covariate Adjustment Strategies”, “Bayesian Statistics and Bayesian Models for Practical Dose Finding and Dose Optimization Oncology Clinical Trials”, and “Analysis of cancer omics data: the network perspective”. In addition to the main conference, the Stat4Onc also held a student poster competition. The student poster award winners were Min Lin and Heeju Lim of the University of Connecticut.

The attending statistics of this year’s symposium are 75 in-person conference attendees, 29 virtual conference attendees, 32 in-person short course attendees, 35 virtual short course attendees, and 55 banquet attendees. We extend our sincere gratitude to our sponsors: ASA Biopharmaceutical Section, Amgen, AstraZeneca, Boehringer Ingelheim Pharmaceuticals, Inc., Sanofi US Services Inc., Servier, and UConn Health Carole and Ray Neag Comprehensive Cancer Center. We would like to thank to Juliet Kapsis and Kate Copeland of UConn UECS and Courtney Trzasko of UConn Statistics for their providing their excellent services and support. We are very appreciative of our student volunteers—Min Lin, Heeju Lim, Sana Gupta, Zhe Guan, Shike Xu, Max Sun, and Jiaqi Liu. Without their dedications and support, the symposium would not have been possible.

For more information about 7th Stat4Onc Annual Symposium, please visit <https://stat4onc.org/events/stat4onc2024/index.html>. The 8th Stat4Onc Annual Symposium will be held at Stanford University on May 14-17, 2025. Please visit <https://stat4onc.org/events/stat4onc2025/> for the updates.

Stat4Onc Photos



Dr. Anthony D'Amico



Invited Session



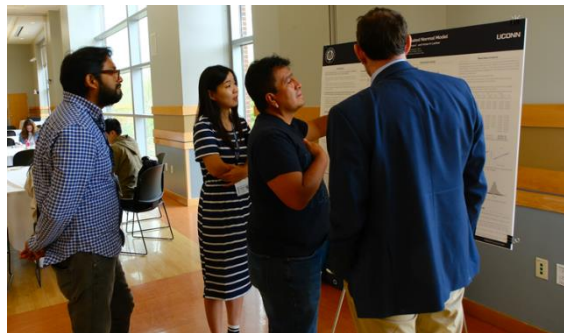
Invited Session



Invited Session



Invited Session



Poster Session



Poster Session



The 37th New England Statistics Symposium

Contributed by Kun Chen and Ming-Hui Chen

The Department of Statistics at the University of Connecticut (UConn) proudly hosted the 37th New England Statistics Symposium (<https://symposium.nestat.org>) from May 20 to May 24, 2024. This flagship annual event of the New England Statistical Society (<https://nestat.org>) has brought statisticians together from across New England and beyond since its inception at UConn in 1987. The symposium continues to be a platform for sharing research, discussing pressing issues, and fostering connections within the statistical community.

This year, the symposium was held in a hybrid format, with in-person sessions at UConn Storrs and live streaming via Cvent. The expanded program included short courses on May 20 and May 21, followed by the main conference from May 22 to May 24—marking the first time the main conference spanned three days.

The theme of the conference, “Statistics Empowering AI,” underscored the powerful role of statistical methods in advancing artificial intelligence. The focus was on the unique ways that statistical thinking and methodology enhance AI's capabilities, from improving data quality and algorithmic transparency to guiding model selection and evaluating robustness. Through diverse sessions and discussions, the conference highlighted how statistics enables reliable, ethical, and impactful applications of AI across multiple domains.

Conference Highlights

- **Short Courses:** Six short courses led by renowned experts covered a wide range of contemporary topics in statistics and data science, including transfer learning, large-scale spatial data analysis, network analysis, informative prior elicitation, causal inference, and deep learning with generative AI.
- **Keynote Sessions:** The conference featured three keynote talks by distinguished speakers—Dr. Jianqing Fan from Princeton University, Dr. Eric Tchetgen Tchetgen from the University of Pennsylvania, and Dr. Ji-Hyun Lee from the University of Florida. A Keynote Panel Session on “Statistics Empowering AI” included Dr. Jianqing Fan, Dr. Dan Nettleton from Iowa State University, Dr. Kavita Ramanan from Brown University, Dr. Faris Sbahi from Normal Computing, and Dr. Jeremy Teitelbaum from UConn, moderated by UConn alumna Dr. Yuchen Fama from Normal Computing. Additionally, NESS President Dr. Eric Kolaczyk from McGill University delivered a banquet talk.

- Program Committee and Sessions: With over 40 members from various institutions and companies, the program committee curated a rich scientific program featuring more than 60 invited sessions, showcasing innovative and cutting-edge research across diverse fields.
- Student Engagement: Many students took part in research and poster competitions, sponsored by MassMutual and Munich Re, as well as a Statathon data challenge sponsored by Travelers. This engagement provided invaluable opportunities for students to showcase their research, gain feedback, and build professional connections.
- Student Awards: Ten students received NESS Student Research Awards, sponsored by MassMutual (<https://nestat.org/researchawards/>), and eight students received NESS Student Poster Awards, sponsored by Munich Re (<https://nestat.org/posterawards/>). In addition, three teams excelled in the NESS Stat-a-thon Challenge, sponsored by Travelers, emerging from more than 20 competing teams. The awards committees, chaired by Dr. Neil Spencer (student research), Dr. Yao Zheng (student poster), and Dr. Shane Sacco (Stat-a-thon), played a pivotal role in recognizing and celebrating student achievements.

The symposium attracted a substantial turnout, with 409 conference registrants and 122 participants in the short courses. The banquet was attended by more than 100 guests. Sponsorship and support came from companies and institutions such as Boehringer Ingelheim, MassMutual, Munich Re, Upstart, Regeneron, Travelers, Plymouth Rock, Servier, Vertex, The Lotus Group, ASA CT Chapter, and DahShu, whose contributions were vital to the event's success.

Special thanks go to NESS leadership, UConn Department of Statistics, UConn Event & Conference Services, and more than 25 UConn student volunteers, whose dedicated support ensured the success of the symposium. The event offered students valuable opportunities to network, share ideas, and develop professional skills, and we hope even more students will participate and volunteer in future events.

Next year's symposium will be hosted by Yale University. For updates, please visit <https://symposium.nestat.org> or contact us at symposium@nestat.org. We look forward to your participation at the next symposium!

NESS 2025 Photos



Dr. Jianqing Fan, Princeton University



Dr. Ji-Hyun Lee, University of Florida



Dr. Eric Tchetgen, University of Pennsylvania



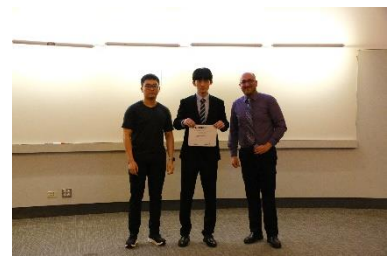
Keynote Panel



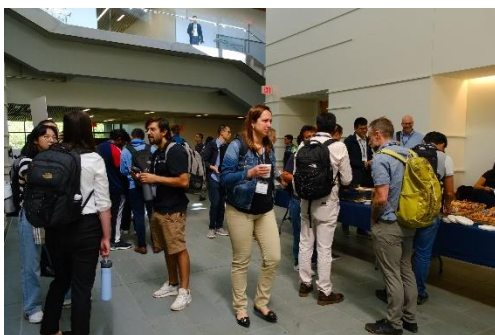
Student Poster winners



Student Research Paper winners



Statathon winner



Lobby



Plenary Session

The Blessing of Dimensionality: Theory and Applications - A Summer Workshop

In July, we hosted a workshop titled the “blessing of dimensionality” with over 30 participants from across the country. In recent years, data analyses have been significantly affected by the development of high-dimensional statistical inference. In an increasing number of domains, the number of features being measured per observation far exceeds the total number of observations. For instance, in microbiology, millions of genes, proteins, or metabolites can be measured for a single individual. High-resolution imaging, finance, online advertising, and climate studies, to name a few areas, are among the fields processing observations of very high dimensional data. The classical theories and software tools developed for the large N (sample size) small P (number of feature) scenarios are of little use in this Big Data context. These classical approaches suffer from the so-called “curse of dimensionality” – suggesting that collecting more information on each subject in a sample worsens the ability to yield good predictions.

However, it has become apparent in recent years that high-dimensionality can be a blessing. This is because, in high dimensions, noise has characteristic features that allow it to be partly filtered out in well-defined ways. This theory relies on convex geometry in high dimensional Euclidean spaces, where one can take advantage of the so-called concentration of measure property. Concentration of measure is related to the well-known theory of shrinkage estimation in the statistical literature, where one gains power by borrowing information across multiple predictors in order to improve the estimation of parameters in models of interest.

The objective of the workshop was to present and eventually solve outstanding theoretical and applied problems in this exciting domain of high dimensional data. The workshop brought together experts from a variety of fields together with early-career researchers to spur new collaborations. Some of the speakers included David Donoho (Stanford), Steve Marron (UNC), Zhou Fan (Yale), and Matt Mahoney (Jackson Lab). For details about the complete program, see the workshop’s [website](#).

The workshop was sponsored by a grant from the college of liberal arts and sciences (CLAS) at UConn, and by BlackRock Inc.

UConn Alumni & Friends Luncheon at JSM 2024

Wednesday August 7, 2024



The UConn Statistics Department Alumni and Friends Luncheon was successfully held on Wednesday, August 7, 2024, from 12 PM to 2 PM, during the 2024 Joint Statistical Meeting. This warm and welcoming buffet gathering took place at the Hyatt Regency Portland at the Oregon Convention Center, with 52 guests in attendance, including faculty, alumni, current graduate students, and many new and familiar faces from both industry and academia. This event was organized by our department's Alumni and Friends Receptions at JSM or other major conferences committee consisting of Yuwen Gu (Chair), Yuping Zhang and Yao Zheng, with invaluable assistance from Tracy Burke (Statistics), and Jessica Alexander (Alumni Relations, College of Liberal Arts and Sciences).

Yao Zheng (yao.zheng@uconn.edu)



Statistics in Pharmaceuticals 2024

Chenguan Wang, Regeneron, Chair of the SIP 2024 Organizing Committee

The Statistics in Pharmaceuticals (SIP) conference, also known as the Conference for Students, was conceived by Dr. Ming-Hui Chen of UConn. The conference aims to introduce students and professionals in quantitative fields, particularly statistics and data sciences, to drug development and careers in the pharmaceutical industry and regulatory agencies. The typical topics covered range from traditional statistical problems in clinical trials to cutting-edge approaches in data science.

In the summer of 2024, the 7th SIP conference was held once again at UConn on August 15-16. This year, Dr. Margaret Gamalo (Pfizer) and Dr. Andrew Moiseff (UConn) delivered the opening remarks, offering their perspectives on drug development from both industry and academic viewpoints. The conference featured three keynote sessions by esteemed speakers: Dr. Amrit Ray (Life Sciences Board Director), Dr. Ivan Chan (Bristol Myers Squibb), and Dr. LJ Wei (Harvard). They offered their insights on the future of healthcare, accelerating drug development through statistical innovation, and the pitfalls of association analysis via regression models. Additionally, six comprehensive plenary sessions focused on career development across major functional teams, such as biostatistics, programming, innovation, and data science within the pharmaceutical and regulatory sectors. These sessions included panelists and speakers from over fifteen industry organizations and three centers within the FDA. Notably, for the first time, SIP offered short courses on its pre-conference day. This year, the short course was conducted by Dr. CG Wang (Regeneron) and focused on real-world data analysis.

In addition to the main conference, the SIP conference features a scholarship program and a student poster competition. This year, a total of ten scholarship applications were received from five PhD students, three master's students, and two undergraduate students. The proud recipients of the awards were Maame Duah (NYU), Kejin Dong (University of Florida), Abraham Adokwei (University of Georgia), and Wasiuddin Najam (Indiana University).

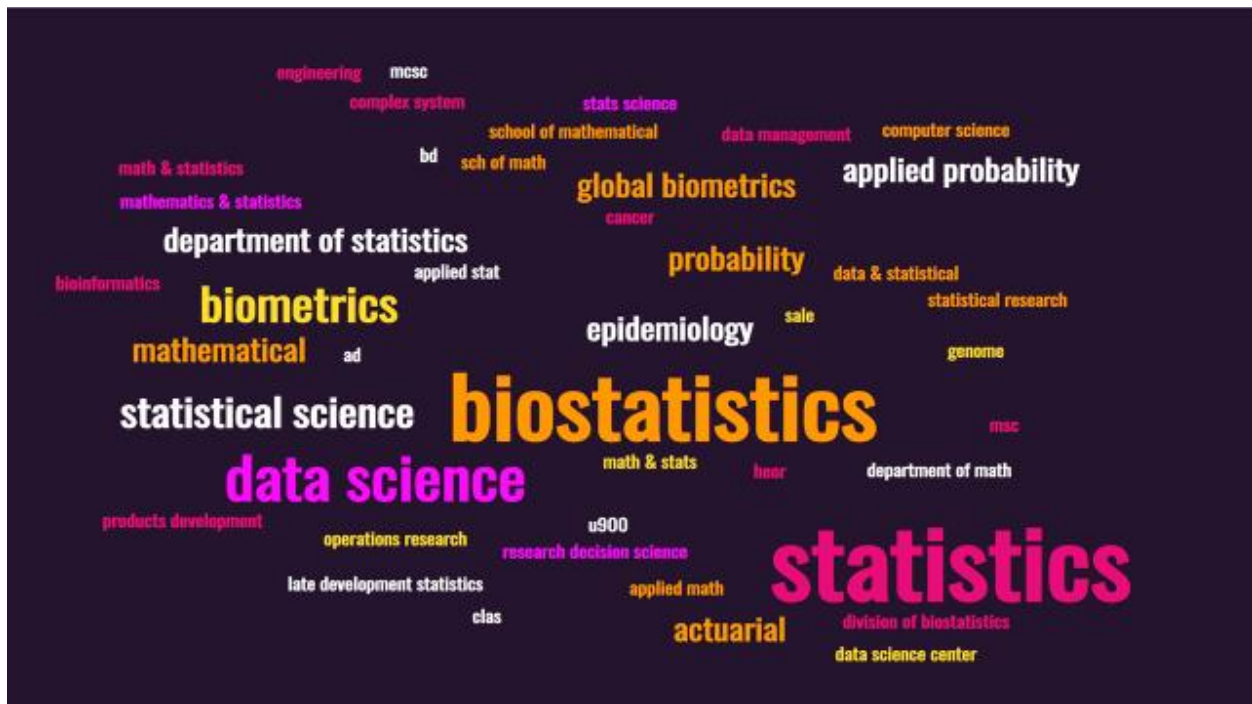
The poster competition saw participation from ten students across various educational levels, including PhD, master's, undergraduate, and high school students. All participants demonstrated high-quality work and excellent presentation skills. The first prizes were awarded to Haolin Li (University of North Carolina), Sana Gupta (UConn), and Vindyani Herath (Boston University).

The SIP conference serves as an excellent platform for industry, academic, and regulatory organizations to collaboratively enhance the role of statistics in drug development. This year, the organizing committee for the SIP conference includes esteemed members from the UConn Department of Statistics, Regeneron, Merck, Pfizer, Biogen, Moderna, Boehringer Ingelheim,

Bristol Myers Squibb, Servier, Takeda, Vertex, FDA CDRH, Gilead, and Astellas. Notably, this is the first year that Gilead has joined the organizing committee. Over the course of more than eight months, the committee has diligently met to design and provide the program for SIP 2024.

We extend our sincere gratitude to our sponsors: Amgen, Gilead, Regeneron, Eli Lilly, BeiGene, and Pfizer. We are also deeply appreciative of the volunteers—Max Sun, Zhe Guan, Shike Xu, Abhishek Thakur, Yanyan Zhu, Rohan Chhatre, Aolan Li, Jiarui Liu, Xiaohui Yin, Min Hee Seo, Sana Gupta, Lucy Liu, and Purvi Trivedi—the webmaster, Heeju Jim, and the supporting UConn staff, Juliet Kapsis and Tracy Burke. Their contributions have been invaluable, and without their dedication, the conference would not have been possible.

We are proud of the achievements of SIP 2024 and are committed to further enhancing the activities for next year. For more information about SIP 2024, please visit <https://events.stat.uconn.edu/SIP2024/index.html>.



Department Welcome Back Picnic



The Department of Statistics' annual welcome back picnic took place on Sunday, September 29, 2024, at the beautiful Patriots Park Lodge by Coventry Lake. Around 80 people attended, enjoying the perfect weather and bringing together students, faculty, staff, and their families for a day filled with great food and lots of fun. This year's picnic had activities for everyone: some joined in a lively basketball game, while others relaxed with board games in the lodge. As always, the potluck spread was fantastic, featuring dishes from around the

world, including savory bites and an assortment of desserts that went quickly. The variety and flavors truly reflected the diverse backgrounds of our department, and there was plenty to enjoy. A highlight of the afternoon was the announcement of our student awards, celebrating the achievements of outstanding grad students honored for their contributions in academics and service. It was a proud moment, and the recognition added an extra layer of excitement to the day. This successful event would not have been possible without the hard work and dedication of our program secretary, Tracy Burke, our Department Event Committee (Wenrui Li, Mary Lai Salvana, Xiaojing Wang, and Ying Zhou), and the Graduate Student Committee. A big thank you as well to the volunteers from our graduate student community and faculty who helped with setup and activities on-site. It was wonderful to come together in such a warm and welcoming environment, and we're already looking forward to future gatherings.

Ying Zhou (yzhou@uconn.edu)



The 30th Distinguished Statistician Colloquium

The Department of Statistics at the University of Connecticut hosted the 30th Distinguished Statistician Colloquium, sponsored by ASA, Pfizer and UConn. The Pfizer colloquium series range from 1978 until 2012 and was renewed in 2018. The colloquium series featured C. R. Rao, Bradley Efron, D.R. Cox, Grace Wahba and many more. For a complete list, see <https://statistics.uconn.edu/pfizer-colloquium/>. The purpose of the Colloquium is to provide a forum for a distinguished statistician to share and disseminate their unique perspective and work in the theory and/or application of statistics. Starting from 2018, the series has been co-sponsored by Pfizer, the American Statistical Association, and the Department of Statistics at the University of Connecticut.



This year's speaker was Dr. Nancy Reid, (https://en.wikipedia.org/wiki/Nancy_Reid) Professor at the [University of Toronto](https://www.utoronto.ca/) where she holds a [Canada Research Chair](https://www.utoronto.ca/research/chairs/crc/) in Statistical Theory.

Professor Reid gave a presentation entitled, "When Likelihood goes wrong" under the auspices of the Pfizer Colloquia by Distinguished Statisticians in Honor of Dr. David S. Salsburg. Following the lecture was a "Conversation with Distinguished Statisticians in Memory of Professor Harry O. Posten". This discussion with Professor Reid was led by Heather Battey, Reader in the Department of Mathematics, Imperial College of London, and Ana-Maria Staicu, Professor of Statistics at North Carolina State University.

For more information, please visit <https://statistics.uconn.edu/pfizer-colloquium/>

We thank Pfizer and the ASA for their generous financial support. We also thank the members of the selection committee –Demissie Alemayehu, Kannan Natarajan and Dan Meyer from Pfizer, Ron Wasserstein and Nancy Flournoy from the ASA, and Dipak Dey (Chair), Joseph Glaz and Ming-Hui Chen from UConn. Our staff and student volunteers for their continuous help for the great success of the event.

Dipak Dey (dipak.dey@uconn.edu)



The 7th New England Rare Disease Statistics (NERDS) Workshop

The landscape of drug development in the rare disease space has significantly expanded and evolved over the past few decades. This progress has been driven by numerous factors, including increased public awareness, favorable changes in drug regulation, advancements in cellular and molecular biology, genetics, innovative clinical trial designs, influx of capital investment, and the availability of highly skilled scientific talent.

As a result, a growing number of regulators, academicians, and industry statisticians are dedicated to bringing orphan drugs to patients, addressing the unique technical challenges inherent to rare diseases. The New England Rare Disease Statistics (NERDS) Workshop was established as a platform where statisticians involved in all stages of rare disease drug development can exchange ideas, share experiences, and network.

The 2024 NERDS Workshop was a fully in-person, two-day event held on October 10–11, 2024, at the Boston Marriott Newton. This year's theme was "Leaping Forward: Innovative Statistical Approaches in Rare Disease Drug Development". The workshop attracted 105 attendees from 35 companies, 10 academic institutions, and the U.S. Food and Drug Administration (FDA). Large represented organizations of participation include Vertex, Moderna, Sanofi, Dyne, and UConn.

Key highlights of NERDS 2024:

- A pre-workshop dinner for speakers and committee members to network.
- Two plenary sessions each day to offer a more focused and impactful program.
- Sponsor tables were introduced, where companies could showcase their products and services.
- A call for papers for a special issue on "Rare Disease Statistics" in the *New England Journal of Statistics in Data Science (NEJSDS)*.

Below is the program for NERDS 2024:

Day 1 – Thursday, October 10, 2024

- 08:00 AM – 08:30 AM | Welcome and Opening Remarks
 - Co-Chairs: HaiYing Wang (University of Connecticut), Yingwen Dong (Sanofi)
 - NESS Representative: Shuangge Ma (Yale University)
 - Industry Representative: Xun Chen (Sanofi)
- 08:30 AM – 10:00 AM | Keynote Session 1
 - Session Chair: HaiYing Wang (University of Connecticut)
 - John Scott (FDA)
 - Kelley Kidwell (University of Michigan)
 - Panel Discussion: Miganush Stepanians (Prometrika)
- 10:30 AM – 12:10 PM | Session 1: Novel Endpoint Development and Regulatory Use
 - Session Chair: Cong Li (Takeda)
 - Speakers: Kristine Rosenberger (Boehringer Ingelheim), Sean Devlin (Memorial Sloan Kettering Cancer Center), Bingxia Wang (Takeda), Angela Qu (PAREXEL)
- 01:10 PM – 03:15 PM | Session 2: Innovations in Statistical Design and Analysis
 - Session Chair: Kristine Rosenberger (Boehringer Ingelheim)
 - Speakers: Eric Baron (Servier), Tianyu Sun (Moderna), Menghan Hu (Sarepta), Lingyun Liu (Vertex), Denis Rybin (Pfizer)
- 03:45 PM – 05:00 PM | Session 3: Innovation in Cell and Gene Therapy
 - Session Chair: Chunpeng Fan (Insmad)
 - Speakers: Quang Nguyen (Regeneron), Xiang Zhang (CSL), Lihua Yue (Bristol Myers Squibb)

Day 2 – Friday, October 11, 2024

- 08:30 AM – 10:00 AM | Keynote Session 2
 - Session Chair: Yingwen Dong (Sanofi)
 - Douglas Kerr (Dyne Therapeutics)
 - Stephen Lake (Alexion, AstraZeneca Rare Disease)
 - Discussant: Lee-Jen Wei (Harvard University)
- 10:30 AM – 12:10 PM | Session 4: Statistical Methods and Causal Inference
 - Session Chair: Ran Duan (Vertex)
 - Speakers: Marie-Abèle Bind (MGH), Marc Buyse (IDDI), Don Rubin (Harvard University), Ting Ye (University of Washington)
- 12:10 PM – 12:30 PM | Closing Remarks

For more details about the conference, please visit <https://nerds.nestat.org/>.

Field of Dreams 2024

Faculty members from University of Connecticut's Department of Statistics staffed a recruitment booth to introduce their graduate program to prospective students at the Math Alliance's Field of Dreams Conference, which was held in Atlanta, Georgia from November 8 to 10, 2024.

The Field of Dreams Conference is a key event organized by the Math Alliance (<https://mathalliance.org>), an organization dedicated to enhancing diversity and expanding opportunities for historically underrepresented groups in the mathematical sciences. This annual conference brings together faculty, graduate students, and undergraduate students from across the United States to foster connections, provide mentorship, and create pathways into advanced mathematical studies.

The conference features research presentations, professional development workshops, and networking opportunities designed to help students from diverse and historically underrepresented groups explore and prepare for graduate degrees in mathematics and related fields. At the heart of the Math Alliance's mission is the belief that diversity strengthens the mathematical sciences community.

Through the Field of Dreams Conference and other initiatives, the organization builds a nationwide community of mathematical scholars committed to mentoring students and promoting an inclusive academic environment. The conference serves as a vital link between undergraduate students and graduate programs, allowing institutions to recruit talented students while providing these students with essential information about graduate school opportunities, research areas, and academic careers in mathematics. This event has become instrumental in transforming the demographic profile of the mathematical sciences in the United States. Check out the Field of Dreams Conference webpage for more details about the program: <https://mathalliance.org/field-of-dreams-conference/index.html>

The University of Connecticut demonstrates its commitment to diversity by actively participating in the Math Alliance's Field of Dreams Conference. As a Math Alliance member, UConn's Department of Statistics regularly sends faculty representatives to the conference to connect with talented students from underrepresented backgrounds interested in pursuing graduate studies in mathematics. This year, Assistant Professor in Statistics Dr. Mary Lai Salvana and the Dean of the College of Liberal Arts and Sciences, Dr. Ofer Harel, along with UConn undergraduate students in the Statistics program, Emmanuel Yankson and Sia Gbondo-Tugbawa, attended the conference and met with other Math Alliance members. Their participation provided students with direct access to learn about UConn's supportive academic environment and innovative research opportunities. The Dean's presence at the conference underscored UConn's dedication at the highest administrative level to fostering an inclusive graduate program and demonstrated the university's interest in recruiting talented scholars from diverse backgrounds.



UConn's Department of Statistics and Department of Mathematics at the 2024 Field of Dreams Conference Graduate Fair.



Dr. Ofer Harel, the Dean of the College of Liberal Arts and Sciences, chatting with undergraduate students about the UConn Statistics graduate programs.

Spotlight on 2024 UConn Statistics Department Distinguished Alumni Award Winners

The UConn Statistics Department is delighted to share that Dr. Solanky and Dr. Banerjee have been selected as this year's Distinguished Alumni. Their remarkable achievements and contributions to the fields of statistics not only brought honor to our department but also provided an invaluable learning experience for our community.

Dr. Tumulesh K. S. Solanky – Distinguished Alumnus Award Recipient



Dr. Tumulesh K. S. Solanky, the Michael and Judith Russell Professor in Data/Computational Sciences in the Department of Mathematics and the Chair of the in the Department of Mathematics at the University of New Orleans, has been honored with the 2024 Distinguished Alumnus Award of the Department of Statistics at UConn. Recognized internationally for his expertise in sequential analysis, selection and ranking, multiple comparisons, and data science, Dr. Solanky has made impactful contributions to statistical research and education over his career.

Since completing his PhD at UConn in 1990 under the guidance of Professor Nitis Mukhopadhyay, Dr. Solanky has led a distinguished career, dedicating himself to the advancement of statistical methods and the growth of his department at the University of New Orleans. That journey began in the Fall semester of 1990 and he has always been there ever since. Under his leadership, he has fostered a vibrant academic environment, and his work as a Seraphia D. Leyda University Teaching Fellow and recipient of the Cooper R. Macklin Medallion reflects his dedication to both students and colleagues.

Dr. Solanky's prolific contributions extend beyond his own research; he has served as an associate editor for journals such as *Sequential Analysis* and the *American Journal of Mathematical and Management Sciences* and has organized numerous symposiums in these and related fields. He served as the Secretary, Treasurer, Vice-President, and then also as the President of the Louisiana Chapter of the American Statistical Association.

He is an internationally acclaimed authority on many aspects of statistical science including (i) partition-problems of treatments with unequal and unknown variances and (ii) second- and higher-order asymptotics under multi-stage sampling designs in clinical trials. His academic influence and achievements underscore the department's legacy of excellence and continue to inspire future statisticians and data scientists.

Sudipto Banerjee – Distinguished Alumnus Award Recipient



Dr. Sudipto Banerjee, Senior Associate Dean for Academic Programs at the UCLA Fielding School of Public Health, has been honored with the 2024 Distinguished Alumnus Award from the Department of Statistics at UConn. A renowned figure in spatial statistics and Bayesian modeling, Dr. Banerjee's work has advanced the theoretical and applied understanding of complex spatial data, making him a respected leader in statistical methodology and public health.

After earning his PhD in Statistics from UConn in 2000 under the mentorship of Professor Alan E. Gelfand, Dr. Banerjee embarked on an influential career, making significant contributions to both academia and practice. His research has garnered numerous accolades, including the Mortimer Spiegelman Award from the American Public Health Association, the George W. Snedecor Award from the Committee of Presidents of Statistical Societies, and he was named the 2024 Sacks Award winner from the National Institute of Statistical Science. Elected as a Fellow of multiple prestigious societies, including the American Statistical Association, the Institute of Mathematical Statistics, International Society for Bayesian Analysis and the American Association for the Advancement of Science, Dr. Banerjee exemplifies the impact of a UConn education on global public health and statistical science.

Dr. Banerjee's contributions extend to the broader statistical community, where he has served as President of the International Society for Bayesian Analysis and held key editorial and organizational roles, strengthening the field and supporting the development of future statisticians. His achievements reflect UConn's commitment to excellence and serve as an inspiration to students and faculty alike.

Dr. Solanky visited us in the fall semester, and Dr. Banerjee is scheduled to visit us in the spring semester next year. Their visits are not only celebrations of their achievements but also serve as inspirational events for our current students and faculty, highlighting the far-reaching impacts of a career in statistics.

Their contributions exemplify the excellence we strive for at the UConn Statistics Department.

Statistics Spring 2024 Colloquium Series

(<https://statistics.uconn.edu/statistics-colloquium/>)

Tuesday, January 16

“Multi-Model Ensemble Analysis with Neural Gaussian Processes”
presented by Trevor Harris, Texas A & M University

Thursday, January 18

“Modeling Extremal Streamflow using Deep Learning Approximations and a Flexible Spatial Process”
presented by Reetam Majumder, North Carolina State University

Monday, January 22

“Identifiable and Interpretable Nonparametric Factor Analysis”
presented by Maoran Xu, Duke University

Thursday, January 25

“Nonparametric Estimation via Variance-Reduced Sketching”
presented by Daren Wang, University of Notre Dame

Monday, January 29

“Continuous Statistical Models for Modern Computational Neuroscience”
presented by William Consagra, Harvard Medical School

Tuesday, January 30

“Variational Mutual Information Estimation: from Data Collection to Large Vision-Language Models”
presented by Qing Guo, Virginia Tech

Thursday, February 1

“Robust Statistical Methods for Noisy Complex Network Data”
presented by Wenrui Li, University of Pennsylvania

Monday, February 5

“Non-convex Bayesian Learning via Stochastic Gradient MCMC and Schrödinger Bridge”
presented by Wei Deng, Morgan Stanley

Tuesday, February 6

“Characterizing Human Reward-based Decision-making Behavior with Reinforcement Learning Models”
presented by Xingche Guo, Columbia University

Thursday, February 8

“Identifiable and Interpretable Nonparametric Factor Analysis”
presented by Sen Na, University of California, Berkeley

Wednesday, February 21

“Integration of Traditional and Telematics Data for Efficient Insurance Claims Prediction”
presented by Himchan Jeong, Simon Fraser University

Wednesday, March 27

“Towards Knowledge Informed Time Series Forecasting”
presented by Dongjin Song, University of Connecticut

Wednesday, April 3

“Variable Selection with a Biased Sample Using Tilted Knockoffs”
presented by Qian Zhao, University of Massachusetts

Friday, April 5

“Change Point Detection for High-dimensional Time Series Models with Local Dynamics”
presented by Abolfazl Safikhani, George Mason University

Wednesday, April 10

“Advances in the use of the Multivariate Contaminated Normal
Distribution in Model-Based Clustering”
presented by Antonio Punzo, University of Catania

Statistics Fall 2024 Colloquium Series

[\(https://statistics.uconn.edu/statistics-colloquium/\)](https://statistics.uconn.edu/statistics-colloquium/)

Friday, August 23

“Model-based Synthetic Control Methods”

presented by Gyuhyeong Goh, Kyungpook National University

Wednesday, September 4

“Analysis of Spatially Clustered Survival Data with Unobserved Covariates using SBART”

presented by Debajyoti Sinha, Florida State University

Wednesday, September 11

“Fast ab initio Uncertainty Quantification and Data Inversion for Dynamical Systems”

presented by Mengyang Gu, University of California, Santa Barbara

Wednesday, September 18

“High Dimensional Space Oddity”

presented by Haim Bar & Vladimir Pozdnyakov, University of Connecticut

Wednesday, September 25

“Interesting Statistical Lessons in Providing Real World Evidence that the ensoETM Device Protects the Esophagus from Thermal Injury During Radiofrequency Ablation”

presented by Babette Brumback, University of Florida

Wednesday, October 2

(Pfizer Colloquium)

“When Likelihood Goes Wrong”

presented by Nancy Reid, University of Toronto

Thursday, October 10

(UConn/UMass Joint Colloquium)

“Multi and Mixed-Precision Computations for Spatial and Spatio-Temporal Statistics”

presented by Mary Lai Salvana, University of Connecticut

Wednesday, October 16

“Two New Methods for Nonlinear Regression in Epidemiology and Environmental Toxicology”

presented by Alex Stringer, University of Waterloo

Wednesday, October 23

“Particle Swarm Optimization as a General-Purpose Optimization Tool”
presented by Weng Kee Wong, University of California at Los Angeles

Wednesday, October 30

“Statistical Approaches to Addressing Data Science Challenges in Epigenetic Aging Research”
presented by Peter Song, University of Michigan

Wednesday, November 6

“Comprehensive Sensing with Stein Shrinkage”
presented by Apratim Dey, Stanford University

Wednesday, November 13

“Confidence Sets for Causal Orderings”
presented by Y. Samuel Wang, Cornell University

Wednesday, November 20

(Distinguished Alumnus Award)

“Some Issues Related to Implementation and Generalization of the Partition Problem”
presented by Tumulesh Solanky, The University of New Orleans

Wednesday, December 4

Synthetic Control Removes Spurious Discoveries from Double
Dipping in scRNA-seq Post-Clustering Analyses
presented by Dongyuan Song, University of Connecticut School of Medicine

Faculty Awards and Achievements

July 2023-June 2024

June 2024

- Xiaojing Wang elected as Program Chair-Elect 2025 for the ASA Social Statistics Section
- Yao Zheng elected as Program Chair-Elect 2025 for the ASA Business and Economics Statistics Section
- Yuwen Gu elected as an Elected Member of the ISI, 2024
- Kun Chen awarded funding from UConn CLAS, Alan R. Bennett College of Liberal Arts and Sciences Public Health Policy Research
- Jun Yan awarded a seed grant from UConn's Institute for the Brain and Cognitive Sciences (IBACS)

May 2024

- Xiaojing Wang awarded a seed grant from UConn's Institute for the Brain and Cognitive Sciences (IBACS)
- Kun Chen receives 2024 Innovative Scholarship award from UConn CLAS

April 2024

- Ming-Hui Chen named AAAS Fellow

February 2024

- Nalini Ravishanker formally elected as President-elect of the International Statistical Institute for the period of 2025-2027

January 2024

- Elizabeth Schifano quoted in Inside Higher Ed on popularity of Data Science programs
- Nalini Ravishanker appointed as Editor-in-Chief of the journal of Applied Stochastic Models in Business and Industry (ASMBI)

September 2023

- Kun Chen elected to ICSA Board of Directors

August 2023

- Dipak Dey recognized for his contributions to Latin American and Brazilian Statistics by the Brazilian Statistical Association
- Ofer Harel awarded the APHS Achievement in Academia Award for 2023

July 2023

- Victor Hugo Lachos Davila selected to receive a Scholarship Facilitation Fund (SFF)

Student Awards and Achievements

July 2023-June 2024

April 2024

- Two Statistical Data Science students awarded with SURF grants (Summer Undergraduate Research Fund) awards

January 2024

- Lucas Godoy, PhD student received honorable mention in the American Statistical Association Student Paper Competition on the Statistics and the Environment section
- Yingfa Xie, PhD student won a student paper award from the Lifetime Data Science (LiDS) Section of the American Statistical Association
- Xiaohui Yin, PhD student won the 2024 ASA Mental Health Statistics Section Student Paper Award

2023 Annual Statistics Department Awards for Student Achievement

- Min Hee Seo and Aditya Vikram Sett received the Fairfield & Dolores Smith Award
- Aditya Vikram Sett received the Gottfried Noether Award
- Eric Szpryngel received the Best Performance in Biostatistics
- Jing Wang and Xiaohui Yin received the Best Performance in Probability
- Jing Wang and Alokesh Manna received the Best Performance in Inference
- Garrett Frady and Brisilda Ndreka received the Teaching Award
- Min Lin and Garrett Frady received the Service Award



2024 Statistics Ph.D. Graduates

May and Summer 2024 Graduates:

Yuhao Li	Sreeram Anantharaman
Daniel Kpormegbey	Swathi Venkatesan
Boyi Zhang	Yingfa Xie
Lucas da Cunha Godoy	Jun Jin
Surya Teja Eada	Brisilda Ndreka
Zhiduo Chen	

December 2024 Graduation Candidates:

Benjamin Stockton

Alumni Awards and Achievements

July 2023-June 2024

July 2023

- Cristina Sison '95 PhD has been selected as a recipient of the Statistics Department Distinguished Alumni Award
- Sujit Ghosh '96 PhD has been selected as a recipient of the Statistics Department Distinguished Alumni Award
- Sujit Ghosh '96 PhD received the D.D. Mason Award at North Carolina State University

October 2023

- Feng Guo '07 PhD has been awarded the Patricia Caldwell Faculty Fellowship at Virginia Tech
- Sudipto Banerjee '00 PhD has been appointed new Senior Associate Dean for Academic Programs at UCLA Fielding School of Public Health

May 2024

- Samiran Ghosh '06 PhD selected as a 2024 ASA Fellow
- Yu-Bo Wang '16 PhD has been promoted to Associate Professor at Clemson University

Department Directory

Haim Bar , Associate Professor	haim.bar@uconn.edu
Tracy Burke , Department Secretary	tracy.burke@uconn.edu
Joseph Cappelleri , Adjunct Professor	joseph.c.cappelleri@pfizer.com
Cynthia Chavez , Educational Program Coordinator	cynthia.chavez@uconn.edu
Kun Chen , Professor	kun.chen@uconn.edu
Ming-Hui Chen , Department Head & BOT Distinguished Professor	ming-hui.chen@uconn.edu
Zhiyi Chi , Professor	zhiyi.chi@uconn.edu
Qiqi Deng , Adjunct Professor	qiqi.deng@uconn.edu
Dipak Dey , BOT Distinguished Professor	dipak.dey@uconn.edu
Joseph Glaz , Professor	joseph.glaz@uconn.edu
Yuwen Gu , Assistant Professor	yuwen.gu@uconn.edu
Xingche Guo , Assistant Professor	xingche.guo@uconn.edu
Ofer Harel , Professor & Dean, CLAS	ofer.harel@uconn.edu
Trevor Harris , Assistant Professor	zft24002@uconn.edu
Emmy Karim , Assistant Professor-in-Residence	emmy@uconn.edu
Amir Kouzehkanani , Adjunct Professor	amir.kouzehkanani@uconn.edu
Victor Lachos , Professor	hlachos@uconn.edu
Wenrui Li , Assistant Professor	wenrui.li@uconn.edu
Suman Majumdar , Associate Professor	suman.majumdar@uconn.edu
Kathleen McLaughlin , Adjunct Professor	kathleen.mclaughlin@uconn.edu
Nitis Mukhopadhyay , Professor	nitis.mukhopadhyay@uconn.edu
Alyssa O'Keefe , Academic Advisor	alyssa.okeefe@uconn.edu
Zhanna Pozdnyakova , Adjunct Professor	zhanna.pozdnyakova@uconn.edu
Vladimir Pozdnyakov , Professor	vladimir.pozdnyakov@uconn.edu
Nalini Ravishanker , Professor	nalini.ravishanker@uconn.edu
Michael Saccucci , Assistant Professor-in-Residence	michael.saccucci@uconn.edu
Dooti Roy , Adjunct Professor	dooti.roy@boehringer-ingelheim.com
May Lai Salvana , Assistant Professor	marylai.salvana@uconn.edu
Elizabeth Schifano , Associate Professor	elizabeth.schifano@uconn.edu
Neil Spencer , Assistant Professor	neil.spencer@uconn.edu
Naitee Ting , Adjunct Professor	naitee.ting@boehringer-ingelheim.com
HaiYing Wang , Associate Professor	haiying.wang@uconn.edu
Xiaojing Wang , Associate Professor	xiaojing.wang@uconn.edu
Jun Yan , Professor	jun.yan@uconn.edu
Yuping Zhang , Associate Professor	yuping.zhang@uconn.edu
Yao Zheng , Assistant Professor	yao.zheng@uconn.edu
Ying Zhou , Assistant Professor	yzhou@uconn.edu

Stay Connected

The Statistics Department would like to stay connected with all of our alumni. If you would like any of your professional or personal updates to be included in the next newsletter, please send them to Tracy Burke at tracy.burke@uconn.edu. Please be sure to include the year you graduated and the degree received in your email.

To stay connected with other University of Connecticut alumni or to get involved in alumni events, please visit <https://www.foundation.uconn.edu/alumni-network/> for more information.

Please visit us at <https://statistics.uconn.edu/>