

Fall in Statistics

UC Riverside Department of Statistics Newsletter, Fall 2024



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“The signal is the truth. The noise is what distracts us from the truth.”

- Nate Silver



Dear Faculty, Staff, Students and Alumni,

I hope this message finds you well and thriving in your endeavors. As we embrace another exciting year, I am thrilled to reflect on our collective achievements, share updates on our department's progress, and highlight the opportunities that lie ahead. Together, we continue to build on our tradition of excellence in research, teaching, and service, fostering a vibrant community that empowers innovation and collaboration.

We are thrilled to welcome three outstanding new faculty members to our department: Prof. Yuzhou Chen, Prof. Xiaoqian Liu, and Prof. Xu Cao. Prof. Chen joins us as an Assistant Professor, having earned his Ph.D. in Statistics from Southern Methodist University in 2021. He completed a postdoctoral fellowship in the Department of Electrical and Computer Engineering at Princeton University (2021–2022) before serving as a tenure-track Assistant Professor in the Department of Computer and Information Sciences at Temple University (2022–2024). His research interests encompass data mining, topological and geometric data analysis, reliability theory, spatiotemporal machine learning, generative AI, deep learning, and nonparametric statistics, with applications in energy systems, healthcare, satellite imagery, and cryptocurrency.

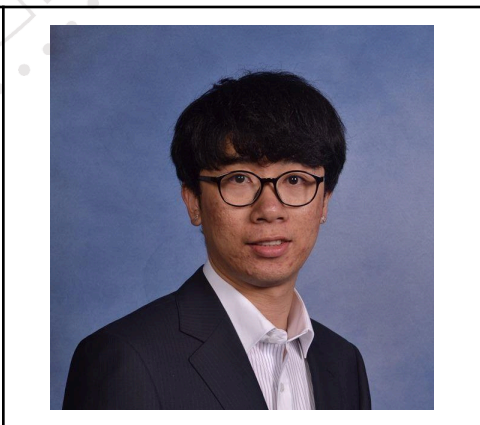
Prof. Liu, also joining us as an Assistant Professor, received her Ph.D. in Statistics from North Carolina State University in 2022. She subsequently worked as a Postdoctoral Researcher at the University of Texas MD Anderson Cancer Center (2022–2024). Her research focuses on statistical machine learning, robust estimation, matrix factorization and completion, large-scale optimization, signal processing, and omics data analysis in cancer studies.



Prof. Yuzhou Chen



Prof. Xiaoqian Liu



Prof. Xu Cao





Prof. Cao, our new Assistant Professor of Teaching, earned his Ph.D. in Statistics from the University of North Carolina, Charlotte, in 2024. His dissertation centered on the design and analysis of two-phase sampling with survival data. With more than six years of teaching experience, including roles as an independent instructor at UNC Charlotte and in community colleges, Prof. Cao was recognized for his exceptional teaching with a nomination for the Outstanding Instructor of Record Award at UNC Charlotte in 2022.

The department is currently conducting a faculty search to fill two additional assistant professor positions. We are optimistic that the exceptional talent we bring on board will further elevate the department's trajectory of growth and success.

While we are excited about the fresh expertise and energy our new faculty will contribute, we also take great pride in celebrating the remarkable achievements of our senior faculty. Congratulations to Prof. James Flegal and Prof. Shuheng Zhou on their well-deserved promotions to full professor. Prof. Flegal is a distinguished scholar specializing in MCMC theory and methods, while Prof. Zhou is recognized as one of the nation's leading theoreticians in the foundational aspects of machine learning.

We also extend our heartfelt congratulations to Prof. Analisa Flores, recipient of the 2024 Junior Faculty Excellence in Teaching (JET) Award. Prof. Flores has been a cornerstone of statistics general education at UCR, playing an instrumental role in developing innovative programs and curricula. She co-developed the Data Science minor program and the CS/STAT 108 course on Data Science Ethics. Beyond her teaching contributions, Prof. Flores has excelled in securing significant external training grants. Her awards include a \$1.7 million NSF DS-Corps grant as a Co-PI, a \$1.275 million California Learning Lab Grand Challenge grant (GLADS-PATH) as the PI, and a \$400,000 NSF Research Experience for Undergraduates (REU) grant as a Co-PI.

Prof. Flores has demonstrated extraordinary leadership, successfully coordinating over 20 senior personnel across eight institutions—including UCR, CSUSB, CPP, and five community colleges—for the GLADS-PATH grant. Her efforts continue to make a substantial impact on both our department and the broader academic community.

			
Prof. James Flegal	Prof. Shuheng Zhou	Prof. Analisa Flores	Prof. Weixin Yao

We are proud to congratulate Prof. Weixin Yao on his election as a Fellow of the American Statistical Association (ASA), the world's oldest and largest professional organization in statistics. This prestigious honor recognizes his "fundamental and outstanding contributions to methodological and theoretical development in mixture models and modal regression; for his dedicated and exemplary service to statistical editorial boards and to the profession."

With Prof. Yao's election, the department now boasts six ASA Fellows. Additionally, our faculty includes two Elected Fellows of the Institute of Mathematical Statistics (IMS) and one Elected Fellow of the American Association for the Advancement of Science (AAAS). Notably, half of our ASA Fellows and both of our IMS Fellows have been elected within the past three years, underscoring the growing national and international recognition of our department's excellence.



UCR Alumni Reception at JSM 2024, Portland OR

This year also marked significant milestones for the department. In April 2024, we completed a comprehensive graduate program review. The external review team commended our efforts in growing the department and enhancing our impact on campus in both research and teaching. They specifically highlighted our leadership and integral role in several interdisciplinary programs, including the MSBA and MPH programs, the Data Science major, the GGB (Genetics, Genomics, and Bioinformatics) Ph.D. program, and the newly established SEHE (Society, Environment, and Health Equity) undergraduate program. The review also offered valuable insights to guide our strategic planning as we strive to build a world-class statistics program.

After a three-year hiatus due to the pandemic, the department resumed its alumni reception at the 2024 Joint Statistical Meetings (JSM) in Portland, OR. The event was a vibrant gathering of faculty, alumni, and friends of the department, including members of our external review team, recent visitors, and department chairs from other institutions. We look forward to reconnecting with even more alumni and friends at next year's JSM in Nashville.

For the first time, UCR hosted the California Forum for Diversity in Graduate Education on October 19, 2024, which included a graduate recruitment event. The forum welcomed 1,200 prospective students and 200 recruiters to our campus. Representing the Department of Statistics, Prof. Alfonso Landeros, Prof. Xu Cao, and GSA President Emily Ouyang hosted a table to promote our graduate programs to attendees. Additionally, Prof. Sastry Pantula, Dean of the College of Natural Sciences at CSU-San Bernardino and a long-time friend of the department, participated in the event and shared his photos, further highlighting the department's collaborative and welcoming spirit.



1 Prof. Alfonso Landeros, Prof. Xu Cao, GSA President Emily Ouyang and Prof. Sastry Pantula (Dean of the College of Natural Sciences at CSU-San Bernardino) at the California Forum for Diversity in Graduate Education, which was held for the first time on UCR campus.

As we reflect on this year's achievements, we are deeply grateful for the invaluable contributions of our alumni. Your ongoing connection to our department serves as a cornerstone of our success and inspires the next generation of leaders in statistics and data science. We also extend our heartfelt gratitude to our dedicated staff, whose hard work behind the scenes ensures the seamless functioning of our programs and initiatives. As the holiday season draws near, we wish you moments of joy, reflection, and gratitude with your loved ones. May the coming year bring new opportunities to grow, give back, and thrive. Together, we will continue to build a legacy that creates meaningful impact within our community and beyond.

Warmest holiday wishes to you and your families.

Sincerely yours.

Yehua Li

Professor & Chair of Statistics

Faculty Spotlight

Xu Cao

Where did you receive your graduate degree?

I received my Master's degree from East Carolina University by December 2017 and my PhD degree from the University of North Carolina at Charlotte by May 2024.

Did you work anywhere before UCR? If so, where and what did you do there?

Before coming to UCR, I worked at Edgecombe Community College as a math tutor and an instructor for Developmental Mathematics from Feb. 2018 - Dec. 2018. From Jan. 2019 - Jul. 2019, I worked at Central Piedmont Community College as an instructor for Intro to Statistics and Pre-Calculus. During my journey at UNC Charlotte, I worked as a GTA and was teaching an undergraduate level course each semester since Fall 2019, and the courses that I ever taught there including Business Calculus, Intro to Probability and Statistics for Computer Science and Intro to Probability and Statistics for Engineering.

What kind of research have you done? How can your research be applied to other data sets?

My dissertation research was about Design and Analysis for Two-Phase Studies with Survival Data. My research can be applied to epidemiology data to determine the significant factors that affect the survival time of patients.

How did your interest in statistics begin?

It is always interesting to see how statistical theories are applied in our daily life and also statistics can provide another view to explain the real world. That is how my interest in statistics started.

What advice would you give to graduate students?

My advice to graduate students is that don't be afraid of asking your advisor any questions, even though sometimes you might think it is a "stupid" question. There are no "stupid" questions, since everyone has a different background.

What hobbies have you recently picked up?

I did not really pick up any new hobbies recently, but one of my favorite things to do is cooking.



Faculty Spotlight

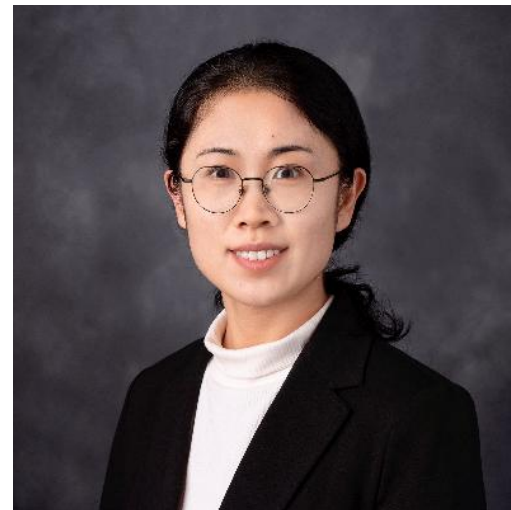
Xiaoqian Liu

Where did you receive your graduate degree?

I received my PhD degree in Statistics from North Carolina State University in 2022.

Did you work anywhere before UCR? If so, where and what did you do there?

I worked as a postdoc fellow in the Department of Bioinformatics and Computational Biology at the University of Texas MD Anderson Cancer Center from 2022 to 2024.



What kind of research have you done? How can your research be applied to other data sets?

My research broadly focuses on statistical machine learning, computational statistics & optimization, and their applications in bioinformatics and cancer biology. On the methodological front, I develop advanced statistical/ML models equipped with efficient computational algorithms for addressing complex statistical challenges. For example, I developed a general computational framework for L2E regression, which enables robust estimation of constrained coefficients. This framework is highly versatile, accommodating various constraints while simultaneously achieving robust estimation and outlier detection. It can be applied across various datasets where robust constrained estimation is desired. On the application side, my primary interest lies in resolving real-world challenges in bioinformatics and cancer biology. My work has tackled related topics including transcriptomics deconvolution, TP53 mutation annotation, and subclonal reconstruction. These projects leverage statistical/ML approaches to analyze different data types, including genomics, transcriptomics and clinical datasets, for extracting novel biological insights.

How did your interest in statistics begin?

My interest in statistics began during my master's program at Renmin University of China. During that time, I was introduced to the book *Statistical Learning with Sparsity: The Lasso and Generalizations*. Delving into its chapters, I learned about how statistical methods can address high-dimensional data challenges. This sparked my interest in statistical research and motivated me to pursue a PhD in statistics, eventually leading me to study in the United States.

What advice would you give to graduate students?

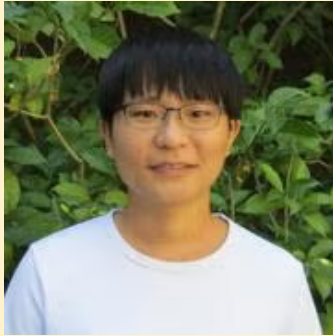
Be self-motivated; be open-minded; and be hard-working. In addition, take care of yourself, both physically and mentally.

What hobbies have you recently picked up?

I started to learn baking very recently. I only tried some simple ingredients. But the process itself was enjoyable—it's relaxing and satisfying to create something delicious from scratch.

Incoming Graduate Students

			<p>MS/ PhD student? PhD</p> <p>Hometown? Iran</p> <p>Statistical interests? I am not sure about this. Perhaps Bayesian Inference or theory of Statistics.</p> <p>Favorite hobby? Reading and listening to Podcasts.</p> <p>Describe yourself in 10 words. Kind, responsible, peaceful, tolerant, not much extroverted, and interested in intellectuality.</p>
<p>Iliana Alvarez Ph.D</p>	<p>Aditi Behera Ph.D</p>	<p>Behzad FallahiFard Ph.D</p>	
			
<p>Shengming Cheng M.S</p>	<p>Axel Galicia Lona M.S</p>	<p>Makena Grigsby M.S</p>	<p>Rajiv Iyengar Ph.D</p>
		<p>MS/ PhD student? PhD</p> <p>Hometown? Irvine, CA</p> <p>Statistical interests? Time series, geo spatial analysis, and biostatistics</p> <p>Favorite hobby? Boxing and volunteering at shelters</p> <p>Describe yourself in 10 words. Ambitious; stressed, sleepy,...</p>	
<p>Nathalie Jones Ph.D</p>	<p>Sharvee Joshi Ph.D</p>		<p>Linlin Liu Ph.D</p>



Pei-Ling Lin
Ph.D

MS/ PhD student?
PhD
Hometown?
Nantou, Taiwan
Statistical interests?
Biostatistics
Favorite hobby?
Listening to music
Describe yourself in 10 words.
Taiwanese, fun, sociable, friendly, adventurous, enthusiastic, curious, persistent, learner, foodie.



Ying Lin
Ph.D

MS/ PhD student?
PhD
Hometown?
Xiamen, China
Statistical interests?
Biostatistics, clinical trials
Favorite hobby?
Swimming
Describe yourself in 10 words.
Optimistic, open minded, curious, adaptable, persistent, organized, friendly, logical, extroverted, supportive.



Yuxin Liu
Ph.D



Nancy Lopez
M.S

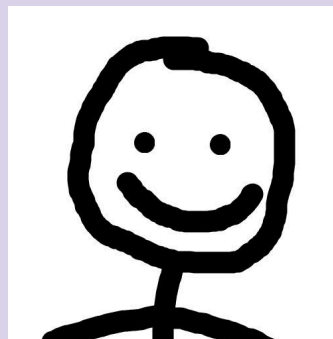


Luhan Tang
Ph.D

MS/ PhD student?
PhD
Hometown?
Kunming
Favorite hobby?
I enjoy photography, painting, playing sports, and playing the piano.



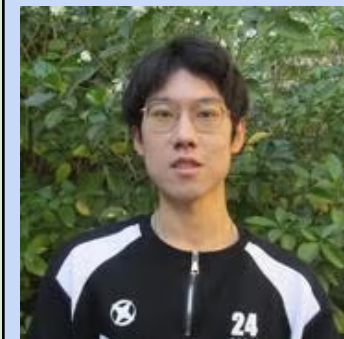
Xinhao Qu
Ph.D



Fushui Wang
M.S



Kaiming Wang
Ph.D



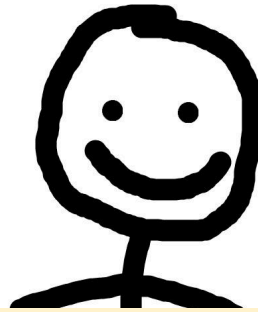
Yifan Wu
M.S



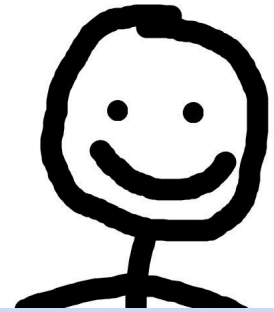
Yijia Xue
Ph.D



Chenguang Yang
Ph.D



Han Zheng
M.S



Bufan Zhou
M.S

Ask the Graduate Students!

What fun or interesting plans do you have for winter break?

“I haven’t nailed down my plans yet, but since this might be my last year in SoCal, I’m thinking of traveling to places like Death Valley National Park. As someone who loves nature and exploring different ecosystems, it feels like a must-do while I’m here. That said, knowing myself, I might just stick to my usual routine-minus TA duties, and enjoy the familiar views of my apartment walls instead.” - Namhwa

“Relaxing and planning for the winter quarter” - Dr. Analisa Flores

Going back to my hometown, Xiamen in China which is a coastal city, and enjoying my time with my family and friends, camping and BBQ along the beach. - Ying

Spending time with friends and family. I may also be partaking in a 5-day trip to see some of the U.S. national parks!
- Jericho

“Going to Europe, traveling” - Luz (Office)

“Originally, I was thinking of traveling this year over winter break, but I can't really do that with a broken leg. I've never had a real Christmas with a tree and decorations, so with the help of my family, I'll be (finally) decorating my house with a bunch of lights, a Christmas tree, and doing more holiday fun activities. We also plan on doing a two day "trip" to Disneyland. I say "trip" because I live in Irvine so it's not like we're traveling, but we'll be staying in a hotel to avoid over exerting my leg.” - Sharvee

“I’m taking a trip to Europe” - Noe

“My family will go to London and pay a visit to Patigo, so we’re going to have a great winter break”. - Dr. Yehua Li

“Going to New Orleans” - Gardner

If you weren’t in statistics, what do you think you’d be doing?

“Honestly, I wasn’t always in love with Statistics. As a junior, I actively tried to escape it by adding Economics as my dual major- mainly because Economics was the go-to major in Korea. If I had successfully "escaped," I’d probably still be in Korea, working an 8-to-5+ job and earning more money at a bank or a financial firm, or maybe even a government employee, just like most of my friends. No life in the U.S., no Ph.D. journey... Life is full of surprises, and I am still wondering how I ended up here.” - Namhwa

“At the end of my undergraduate program, I was actually signed to an agency and was sent to become a model! Had I not been accepted into a master's program at the time, I probably would've gone down that route but I realized I was more content with going down an academic path.” - Sharvee

If you weren't in Statistics, what do you think you'd be doing? Maybe arts or architecture? - Ying

Probably something related to geography, like GIS. Also being a food-blogger isn't out of the picture for me. - Jericho

“Chippendales dancer in another lifetime” - Noe

“My undergraduate training was in mathematics so maybe I would have become a math teacher” - Dr. Yehua Li

“Working in a second hand vinyl shop in Portland, Maine” - Gardner

What's a new statistical theorem, topic, or idea you've discovered lately in your research or classes?

“Lately, I've been diving into Sensitivity Analysis in causal inference. At first, the idea felt a bit strange—imagine hypothesizing unmeasured confounders with specific underlying distributions and treating their parameters as fixed and known. I remember thinking, "Wait, we can do that?" But now, I've started to accept the framework and am even working on developing a new Sensitivity Analysis methodology.” - Namhwa

“I learned this from a recent colloquium talk. I didn't know statistical phylogeny was a thing.” -John P.

“In STAT206, Dr. Landeros introduced the householder matrix for our latest homework. It's been a bit of a challenge figuring it out, but it's been pretty cool to learn more about QR decomposition and using the householder matrix we "created" to implement our own QR decomposition algorithm.” -Sharvee

“Learn to use Julia.” - Ying

“I've been working a lot with variational autoencoders. It's amazing to see these models being used in image processing.” - Jericho

“Using concentration inequalities to get asymptotic almost sure convergence bounds” - Noe

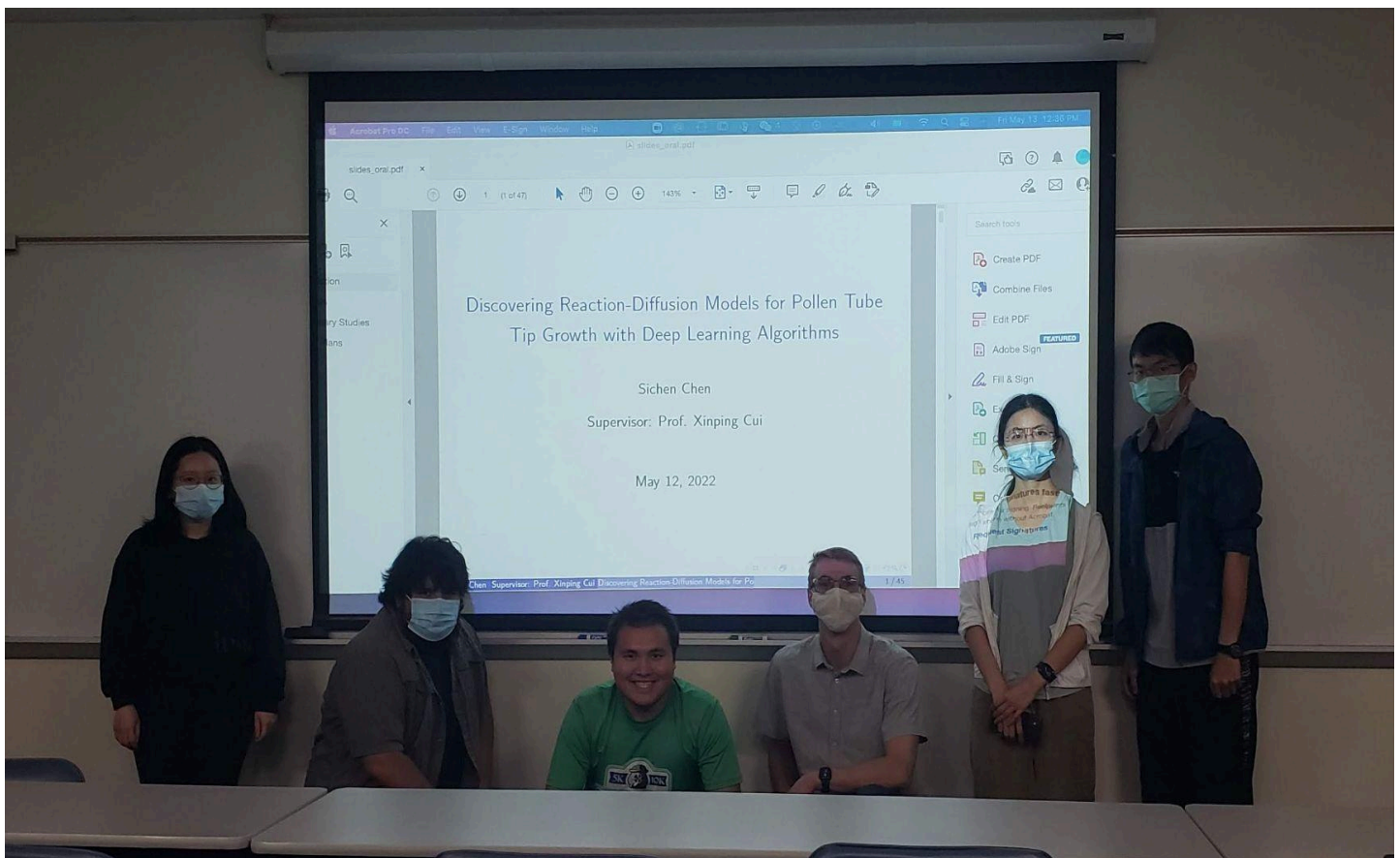
“Lately I have been working on some point process data with very complicated spatial and temporal correlation structure and with that framework the effective sample size has a very different order, so I've been working on ways to address that.” - Dr. Yehua Li

“Joint modeling” - Gardner

Graduate Student Seminar

A Seminar for Graduate Students

The GSS series is an opportunity for graduate students in our department to showcase some of the cool things they are doing, gain presentation practice, and get to know each other. The presentations can be on a variety of topics, including research, projects, internships, a topic you want to investigate, a paper that you found interesting, and more. Anything that is appropriate for the graduate-student level audience that could be of interest to the graduate students of this department is welcomed. The GSS welcomes, and **ENCOURAGES**, anyone who is interested to attend. This includes undergraduates, faculty, and staff. This is open to **ALL** graduate students.



We are always looking for speakers to present a talk. Whether it involves research, class projects, tutorials, or other ideas, we would love to have you present!

If interested, please email ucr.grad.stat@gmail.com with your plans for a talk!

Important Dates

Event	Dates
Initial Registration Window	Nov. 4 - Nov. 26, 2024
Continuing Registration Window	Nov. 27, 2024 - Jan. 17, 2025
First Day of Winter Quarter	Jan. 2, 2025
First Day of Winter Instruction	Jan. 6, 2025
Academic and Administrative Holidays	Jan. 20, 2025 Feb. 17, 2025
Add/Drop Date Deadline	Jan. 17, 2025
Last Day to Withdraw from Course (no fee)	Jan. 24, 2025
Last Day to Change Grading Basis (no fee)	Jan. 24, 2025
Last Day of Instruction	Mar. 14, 2025
Finals Week	Mar. 15-21, 2025
Spring Break	Mar. 24-28, 2025
First Day of Spring Quarter	Mar. 27, 2025
First Day of Spring Instruction	Mar. 31, 2025

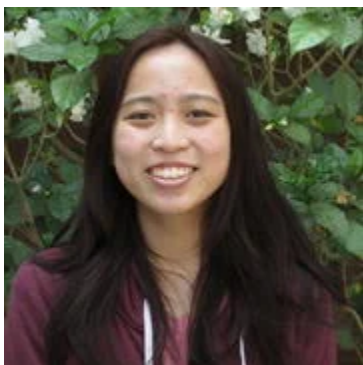
Mu Sigma Rho

Mu Sigma Rho ($\mu\sigma\rho$) is the US national statistics honor society. It seeks to promote and encourage scholarly activity in statistics and to recognize outstanding achievement among students and faculty in eligible academic and nonacademic institutions.

It aims to do the following:

- Electing members according to their academic achievement, especially in the field of statistics.
- Engaging in activities designed to promote the statistical and general scholarly development of its members.
- Encouraging participation in the various professional statistical societies and associations. We are always looking for leaders and planning activities.

Board Members



Emily Ouyang
President



Jonathan Darius
Vice President



Jazmyne Patlan
Secretary & Treasurer

HiSS Officers



Soumya Agarwal
Co-President



Wasim Khan
Co-President



Aaron Lin
Vice President



Khushi Chaudhari
Treasurer/Fundraising Coordinator

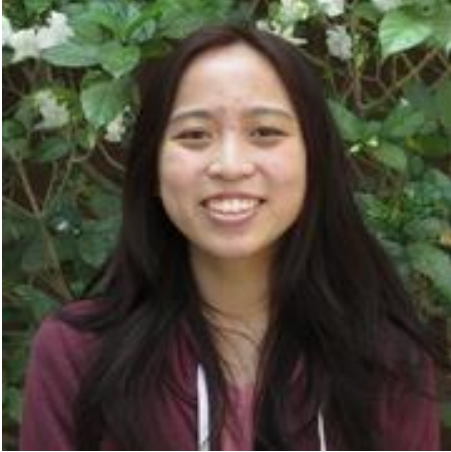


Ethan Tran
Social Media/Outreach Coordinator



Advhait Purayil
Event Coordinator

GSA Officers



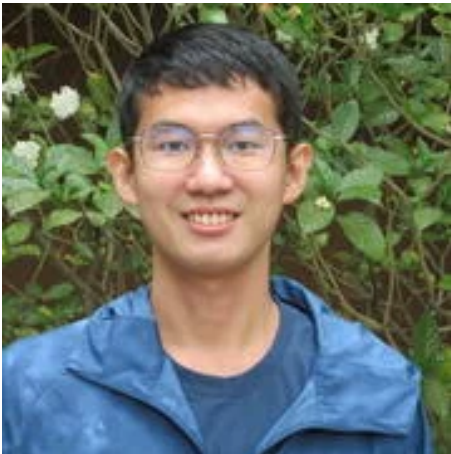
Emily Ouyang
President



Fangyi Cao
Vice President



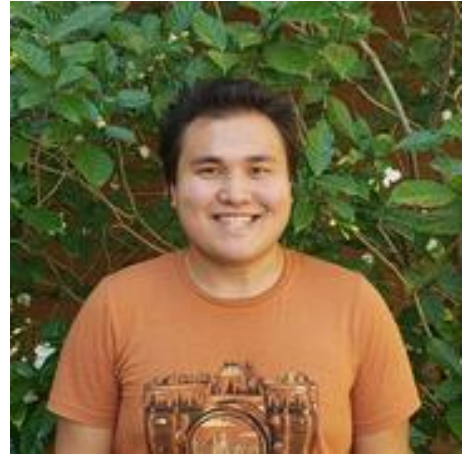
John Eager
Secretary/DEI Representative



Chin-Sheng Teng
Secretary



Shiwei Fu
GSC Representative



Jericho Lawson
Event Coordinator

Feedback or Interested in Joining Us?

If you have any feedback or suggestions you would like to make or you would like to join us, please email ucr.grad.stat@gmail.com.

DEI Resource Page

Emergency Resources

[UCR Police & Campus Safety Department](#) supports Highlanders by providing professional service to the community, while partnering with students, staff and faculty to build a safe, inclusive and empowering community through prevention, intervention, education & efficacy. They also provide Crime Prevention Training, Outreach & Education Services. Email: ucpdgeneralmail@ucr.edu; Phone Numbers: EMERGENCY: 911, UCR Police Dept. Non-Emergency Phone: (951) 827-5222; Address: 3500 Canyon Crest Drive, Riverside, CA 92521; Instagram: @ucrpolicdept

CA Resources

[Regarding any fears of federal action against undocumented people \(or even legal immigrants\) in the U.S.:](#) The California Governor has called a [special session of the legislature](#) to consider steps to protect vulnerable communities in California. During the President-elect's first term, California passed [SB 54, the California Values Act](#), sometimes referred to as the "sanctuary state" bill, which places baseline protections that limit local and state law enforcement from acting as deportation agents, and it protects Californians from the dangerous consequences of the future administration's deportation machine. In addition, [all of California public universities \(including the CSU and UC\) have privacy protections](#) for all its students that can help shield you from the federal government learning your immigration status.

[Diversity resource centers](#) List of diversity resources gathered by California State University.

[Student Mental Health Resources and Promising Practices](#) List of resources available to students outside of the UC through various collaborations.

UCR Resources

[Student Technology Support](#) Contact Bearhelp@ucr.edu or call (951)827-4848.

[Loan2Learn](#) If you do not have or cannot acquire the necessary technology for the course, you can apply to the Loan2Learn program to get a loaner device.

[Academic Calendar](#) Important deadlines are provided in the academic calendar including dates for campus holidays, withdrawing from a course, changing grading basis, etc.

[Academic Resource Center \(ARC\)](#) In addition to course TA office hours, TAP (Tutorial Assistance Program) provides tutoring in a variety of subjects and disciplines. Tutoring is free to all UCR students. Students are seen on a walk-in and appointment basis. For more information, visit the website or call the ARC Front Desk at 951-827-3721 to make an appointment.

[Student Disability Resource Center](#) UC Riverside is committed to providing equal access to learning opportunities to students with documented disabilities. To ensure access to this class, and your program, please contact the Student Disability Resource Center (SDRC) to engage in a confidential conversation about the process for requesting accommodations. If you are a student registered with the SDRC, please ensure you request your quarterly accommodations through the [R'Ability](#) website.

[Health, Well-being & Safety \(HWS\)](#) is a made up of nine departments dedicated to listening, supporting, and providing UC Riverside students with helpful resources and services for your overall safety and well-being.

[Student Health Services \(SHS\)](#) Accessible and comprehensive medical care for students.

[Counseling & Psychological Services \(CAPS\)](#) Get free, professional and confidential mental health services.

[Student Affairs Case Management](#) Case managers are the path-clearers and problem-solvers for UCR students dealing with mental health, academic, relationship, food insecurity and other stressful crises.

[The Well](#) The Well Health Promotion and Education Department provides free pads and tampons for UCR students, access to free safer sex supplies and other well-being supplies from the Grab-n-Go station in their lobby, and other resources that foster student well-being, academic success, and support a healthy campus environment.

[CARE \(Campus Advocacy, Resources & Education\)](#) is a Confidential intervention and prevention support program committed to ending sexual violence at UC Riverside. We seek to unite, inspire and cultivate a community culture of care by providing direct advocacy, resources and prevention educational programming related to issues of sexual assault, relationship violence and stalking to students, staff, faculty and UCR affiliates. Interested in learning about CARE? [Access several self-help resources](#) developed to support your individual needs.

[R'Pantry](#) R'Pantry provides emergency non-perishable food, personal hygiene, household care, and childcare items to both undergraduate and graduate students experiencing food insecurity.

[Office of Diversity, Equity, and Inclusion](#) Learn more about the rights of pregnant and parenting students by consulting the Office of Diversity, Equity, and Inclusion.

[Office of Civil Rights \(formerly Title IX, Equal Opportunity, and Affirmative Action\)](#) has a mission to promote equity and create a working, living and learning climate free from discrimination and harassment, enforces UC anti-discrimination policies. For any concerns regarding gender-based discrimination, sexual harassment, sexual misconduct, stalking, or intimate partner violence, the University offers a variety of resources, including advocates on-call 24/7, counseling services, mutual no contact orders, scheduling adjustments, and disciplinary sanctions against the perpetrator. They can be reached at (951)827-7070. You can also [file a report](#).