Fall in Statistics

UC Riverside Department of Statistics Newsletter, Fall 2022

In this issue:

"Those who ignore Statistics are condemned to reinvent it."

- Brad Efron

Photograph courtesy of Jericho Lawson

Letter from the Chair

Dear Faculty, Staff and Students,

Welcome to the new academic year of 2022-2023! In addition to welcoming our new graduate students, I would also like to welcome our new faculty and new staff members with the highest enthusiasm to UCR and our Statistics family.

Starting from Jul 1st, 2022, Prof. Zhe Fei and Prof. Vivian Wei Li joined UCR as Assistant Professors of Statistics. Prof. Fei got his PhD in Biostatistics in 2019 from University of Michigan, and held a faculty position at UCLA before joining UCR. His research interests include high dimensional statistics, big data analytics, survival analysis, and machine learning. He has published in top statistical journals such as *Journal of the American Statistical Association, Biometrics* and *Journal of Machine Learning Research,* as well as journals in various scientific domains.

Prof. Vivian Li got her PhD in Statistics from UCLA in 2019 and held a faculty position at Rutgers University before joining us. Prof. Li is an expert in Bioinformatics and Computational Biology. Her research interests include statistical and machine learning methods for single-cell genomic data, bulk-tissue high throughput sequencing data, alternative RNA splicing and polyadenylation, gene regulatory networks and comparative bioinformatics. She has received numerous grants and awards, including a prestigious, multi-million dollar NIH R35 grant and a recent best paper award from 2022 International Conference on Research in Computational Biology.

There are also many good news to share on our current faculty members. Prof. Esra Kurum has been promoted to Associate Professor effective July 1st, 2022. This well-deserved promotion is recognition of her excellent research and teaching, her outstanding efforts on increasing diversity, equity and inclusion on campus, and her exemplary services to the college and to the department.

Prof. Zhe Fei	Prof. Vivian Li	Prof. Esra Kurum	Prof. Shujie Ma

Prof. Shujie Ma is elected in 2022 as a Fellow of the Institute of Mathematical Statistics (IMS), in recognition to her outstanding contributions to statistical methodology and theory, especially in nonparametric and semiparametric machine learning methods for massive datasets and for her excellent services to the statistical editorial boards and to the profession. Professor Ma is currently serving on the editorial board on several top statistical journals, including the *Journal of the American Statistical Association* and *Journal of Business and Economics Statistics*. The current faculty of the department include 3 Elected Fellows of the ASA and 2 Elected Fellows of the IMS. I am sure more of our faculty will soon join their ranks.

The two intercollege programs, that Statistics plays a critical role in, continue to flourish. The MS in Business Analytic program, a joint venture between School of Business and Department of Statistics, is in its 2nd year and poses to triple its enrollment. In Fall 2022, the Data Science program, a collaboration between Computer Science and Statistics, admitted 54 freshmen, which tripled the class size since it was first launched in 2020. With transfers and change of majors, there are current 190 students declared as DS majors. For a young program just started its 3rd year, DS is quickly becoming one of the hot majors in UCR. With this growth comes great demands for statistics classes. The department is offering a new core course series STAT 156AB for DS majors, and many of our upper division course (STAT 107, 167, 169, 170) are posed to triple their class sizes soon. These demands will spurs further growth of the department.

The department also welcome two staff members to join our administrative team. Barbara Retana and Patricia Alverado are our new Contracts and Grants Analyst and Procurement Analyst, respectively. Together with Melissa and the rest of our administrative team, they will help to support the ever-increasing teaching and research needs in our department.

We are extremely excited for the new talent and expertise that our new faculty bring. And we are equally happy to see our senior faculty continue advancing their careers and bringing new honors and glory to the department. With the increasing demands in statistics on our campus, the department will continue its growth. As a result, we will be able to offer more graduate level courses, provide more comprehensive statistical trainings, and cover more state-of-the-art research topics for our graduate students.

Sincerely yours.

Yehua Li

Professor & Chair of Statistics

Faculty Spotlight

Zhe Fei

Where did you receive your graduate degree?
I received my PhD in Biostatistics from University of Michigan, Ann Arbor.

Did you work anywhere before UCR? If so, where and what did you do there?
I spent 3 years in the Biostat department of UCLA as an Assistant Professor In-Residence before joining UCR this summer.

What kind of research have you done? How can your research be applied to other data sets?
I have been doing high dimensional statistics and modeling related to various types of big data. I have developed methods for high dimensional inference and prediction problems. There is a wide range of applications in genetics, epidemiology, medical research and so on.

How did your interest in statistics begin?
I have been learning math since youth and centered my undergraduate study around math and statistics. I find statistics most fascinating in help solving real world problems.

What advice would you give to graduate students?
Find a specific research question you are interested in and go deep into it. At the mean time, try to learn and master the fundamentals of statistics and the theoretical tools you need for your research.

What hobbies have you recently picked up?
Since the long commute I am taking right now, I picked up listening to audiobooks and have been enjoying it a lot. I just finished Pride and Prejudice for the first time.

Faculty Spotlight
Wei (Vivian) Li

Where did you receive your graduate degree?
I got my Ph.D. in Statistics from University of California, Los Angeles.

Did you work anywhere before UCR? If so, where and what did you do there?
I worked at Rutgers, The State University of New Jersey for three years before moving to UCR. At Rutgers, I was an Assistant Professor of Biostatistics at the School of Public Health. I established a research program in statistical genomics and taught several graduate-level Biostatistics courses there. Some of the research work I've done at Rutgers has led to new ideas I'm currently exploring at UCR.

What are your research interests? What research project(s) are you currently working on?
I have a broad interest in statistical questions arising from biological and biomedical data. My group develops statistical and machine learning methods to analyze and interpret these data. We also develop software tools for these methods so that they can be directly used by biologists. We have been focusing on data science challenges arising from gene expression data in recent years. Example questions include imputation of missing values, integration of data from different sources, and statistically principled comparison of gene expression between diverse biological conditions (e.g., different cell types or health status). Through collaborations with biomedical researchers, we use these methods to better understand public health questions related to liver cancer, chlamydia, neurology, etc.

How did your interest in statistics begin?
My interest in statistics began when I was an undergraduate student. At my university, undergraduate programs in both statistics and mathematics were offered by the School of Mathematics, and their core courses were almost the same. After taking those courses, it became clear that I had a stronger interest in statistical topics such as multivariate analysis and data mining. As a result, it was a straightforward decision for me to choose statistics when I applied for graduate programs.

What advice would you give to other graduate students?
"The best thing about being a statistician is that you get to play in everyone's backyard", but it is not always easy for junior students to decide which "backyard" is your favorite. I found it useful to actively attend seminar talks and read review papers in areas that you are interested in, to help you think about if you want to invest your time in an area. If you are interested in an interdisciplinary field, then it would be beneficial to attend seminars in other related departments as well. This also means that you need to be willing to get your hands dirty, as data from real-world problems or your collaborators usually require cleaning and processing before you can work on statistical modeling.

For more senior students who already have some research experience, I would suggest that you seek every opportunity to present and communicate your work at meetings and conferences. These are great platforms to practice your communication skills and obtain feedback from other researchers in your field, and these skills are essential whether you choose to stay in academia or move to industry. I think the Graduate Student Seminar organized by the Statistics GSA is a perfect opportunity to practice.

What is one interesting fact about yourself you would like to share?
I had always wanted to get a puppy and was not a big fan of cats. But during the pandemic, my family adopted a cat as our friend could not take him on an international flight. Now I'm thinking about adopting a second cat.

Incoming Graduate Students

Fangyi Cao

Pronouns
She/Her

M.S. or Ph.D. student?
Ph.D.

Statistical Interests
High dimensional Statistics

What do you do in your spare time?
Do sports, watch animation

Best chip flavor?
Lays original

Gardner Eager

Pronouns
He/Him

M.S. or Ph.D. student?
Ph.D.

Statistical Interests
I come from an applied math background with an emphasis on probabilistic modeling. Bayesian Analysis, Graphs and Networks, Machine Learning, and Operations Research with probabilistic models.

What do you do in your spare time?
Games, concerts, dnd, cooking

Best chip flavor?
Utz Crab Chips but they're only on the east coast

Shiwei Fu

Pronouns
he/him/his

M.S. or Ph.D. student?
M.S.

Statistical Interests
Econometrics, Nonparametric estimation

What do you do in your spare time?
Watch Netflix

Yong Ju Lee

Best chip flavor?
BBQ

Pronouns
she

M.S. or Ph.D. student?
M.S.

Statistical Interests
Not decided yet

Jing Ling

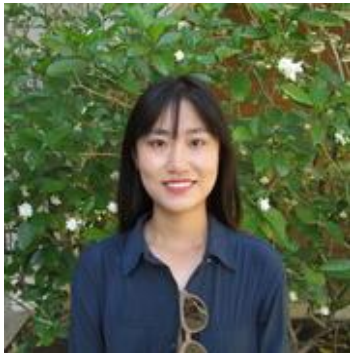**What do you do in your spare time?**
Planting flowers and crafting

Best chip flavor?
Original

Ruijing (Nayla) Liu

Pronouns
she/her/hers

M.S. or Ph.D. student?
M.S.

Statistical Interests
Biostatistics, Machine Learning

What do you do in your spare time?
Watch movies, squash

Best chip flavor?
Honey Mustard

Brian Neal

Pronouns
He/him

M.S. or Ph.D. student?
Ph.D.

Statistical Interests
Mathematical statistics, statistical learning, statistical computing, software development

What do you do in your spare time?
Hiking, music, lifting, swimming, TV, reading, mindfulness meditation

Best chip flavor?
Salt & vinegar

Ruotian Shi

M.S. or Ph.D. student?
Ph.D.

Statistical Interests
Machine Learning

What do you do in your spare time?
Play video game, guitar, books and gym

Best chip flavor?
Kettle Cooked Jalapeño & Classic

Xunyang (Bradley) Ye

Local Restaurant and Recipe Recs

Ok Tofu House (Riverside), suggested by Vivian Li

Why do you like this place?

My favorite is their pancake, and their tofu soup has lots of flavor.

Any tips?

Service is a bit slow, so I would avoid rush hours when I visit there again.

Pumpkin Bread (link), suggested by Julia Lee

Why do you like this dish?

My favorite flavor is clove, cinnamon, & ginger (pumpkin spice) and this is a super simple recipe that is even Julia proof (I'm not the best baker and even I have not messed this up). Also it has all the flavors and ingredients of pumpkin pie without as much effort. A very fall festive baked good.

Any tips?

Don't over mix. I add in 1/8 cup of orange juice and 1 table spoon of vegetable oil with wet ingredients to make it more moist and less dry. I cut the amount of sugar to be 1 and a half cups because I think it is too sweet otherwise. You can add in chocolate chips or nuts/dried fruit but I think it is pretty good plain. Recipe makes 2 loaves.

Aloha Pizza and Pasta (Riverside), suggested by Evan Mason

Why do you like this place?

They're Raiders fans.

Any tips?

Hot Sandwiches and Pizza good, pasta less so.

Sonora Grill (Moreno Valley), suggested by Barbara Retana

Why do you like this place?

Delicious smoked meats, fresh salsa, and fresh tortillas in their authentic Mexican dishes.

Any tips?

CARNE ASADA SUPER FRIES!

Smoke and Fire (Riverside), suggested by Jericho Lawson

Why do you like this place?

They cook up delicious American BBQ and tasty Nashville Hot Chicken. The environment is very lively and their brisket is so tender! Plus, they have smoked lemonade there. I don't know how healthy all of this is, but it's worth it!

Any tips?

This place gets busy during weekends and dinnertime, so I would eat there during their off-hours (e.g. mid-afternoons). Also, get their brisket!

Mu Sigma Rho

In 2021-22, Mu Sigma Rho at UCR inducted 8 new members majoring in disciplines such as Statistics, Mathematics, Political Science, and Computer Science with Business Applications. Congratulations to the new members!

Stella Aurelia	**Jasmine Lau**
John Gillen	**Justin Liu**
Sean Huang	**Asha Pantula**
Wesley Kao	**Rachna Rawalpally**

UCR now has a total of 113 students/faculty that have been inducted in MSR since 2011.

Mu Sigma Rho (μσρ) 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.
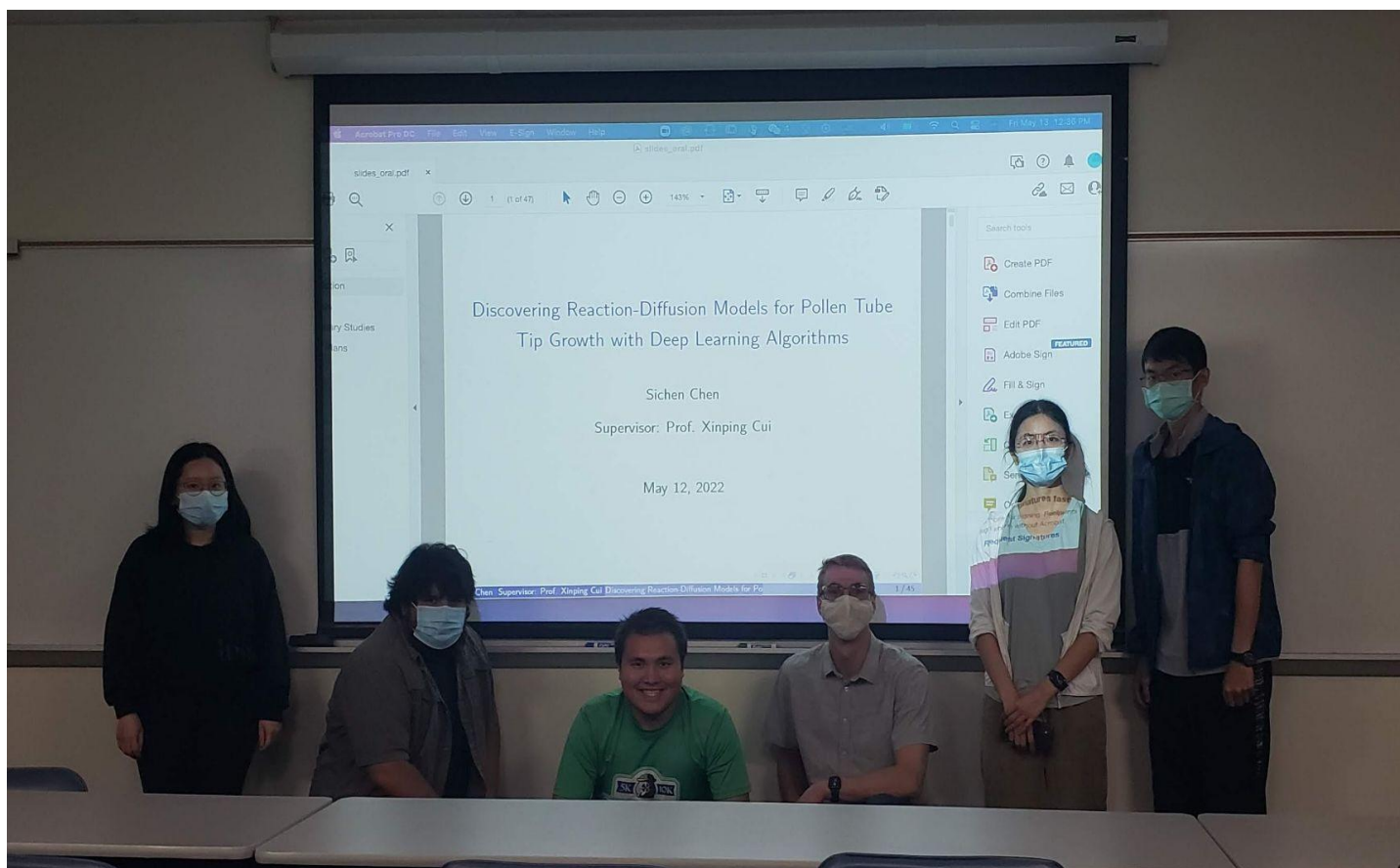

Board Members

Rebecca Kurtz-Garcia	**Emily Ouyang**	**Sean Huang**
President	*Vice President*	*Secretary & Treasurer*

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!

List of Graduate Courses

Winter 2023

Course	Name	Times (tentative)	Instructor
201B	Theory of Probability and Statistics	Tues/Thurs 11a-12:20p Thurs 3:30-4:20p	Ma, Shujie
202B	Regression, ANOVA, and Design	Mon/Wed/Fri 11-11:50a Wed 10-10:50a	Ghosh, Subir
205	Discrete Data Analysis	Mon/Wed 3-4:20p Wed 2-2:50p	Yao, Weixin
208	Statistical Data Mining Methods	Mon 9:30-10:50a Wed 12:30-1:50p Mon 1-1:50p	Li, Vivian
210B	Advanced Theory of Probability and Statistics	Tues/Thurs 11a-12:20p Tues 2-2:50p	Zhou, Shuheng
251	Statistics Colloquium	Tues 3:30-4:50p	Kurum, Esra
293	Methods in Applied Statistics	Tues/Thurs 12:30-1:50p Thurs 2-2:50p	Kurum, Esra

Spring 2023

Course	Name	Times	Instructor
201C	Theory of Probability and Statistics	TBD	Zhou, Shuheng
202C	Regression, ANOVA, and Design	TBD	Ghosh, Subir
203A	Bayesian Statistics I	TBD	Flegal, James
207	Advanced Statistical Computing	TBD	Fei, Zhe
251	Statistics Colloquium	TBD	TBD
255T	Modern Nonparametric Statistics	TBD	Yao, Weixin
288	Literature Seminar	TBD	Jia, Zhenyu

Important Dates

Event	Dates
Initial Registration Window	Oct. 31 - Nov. 22, 2022
Continuing Registration Window	Nov. 23, 2022 - Jan. 20, 2023
First Day of Winter Quarter	Jan. 4, 2023
First Day of Winter Instruction	Jan. 9, 2023
Academic and Administrative Holidays	Jan. 16, 2023 Feb. 20, 2023
Add/Drop Date Deadline	Jan. 20, 2023
Last Day to Withdraw from Course (no fee)	Jan. 27, 2023
Last Day to Change Grading Basis (no fee)	Jan. 27, 2023
Last Day of Instruction	Mar. 17, 2023
Finals Week	Mar. 18-24, 2023
Spring Break	Mar. 27-31, 2023
First Day of Spring Quarter	Mar. 29, 2023
First Day of Spring Instruction	Apr. 3, 2023

HiSS Officers

William Bryant
Co-President
wbrya005@ucr.edu

What are your pronouns?
He/Him

What is your year and major?
4th year double major in economics and statistics

What are your statistical interests?
Machine learning and financial quantitative research

What do you do in your spare time?
I love architectural design and fashion design

What is an interesting fact about yourself?
I love to sew and design clothing

Arun Premanand
Co-President
aprem002@ucr.edu

What are your pronouns?
she/her

What is your year and major?
4th year statistics major

What are your statistical interests?
Time series analysis and statistical game theory

What do you do in your spare time?
I like reviewing movies and playing board games during my spare time.

What is an interesting fact about yourself?
An interesting fact about me is that I'm allergic to carrots.

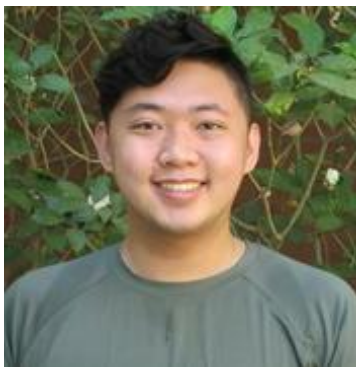**Surabhi Tadvalkar**
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Tobias Rasmussen
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GSA Officers

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jlaws011@ucr.edu	eouya001@ucr.edu	btran025@ucr.edu	rkurt001@ucr.edu

Statistical Interests

• Sports Analytics • Machine Learning • Data Mining	• Applications in Education Research	• Biostatistics • Stochastic Processes • Longitudinal Data • Time Series Analysis	• Computational Statistics • Nonparametric Statistics • Categorical Analysis • Data Science

Hobbies

• Hiking • Playing and watching sports • Eating at new restaurants • Exploring new places	• Eating	• Listening to music • Learning new languages • Trying new foods • Pottery	• I compete in triathlons and running races. • I also sew.

One Place You Want to Visit

Great Smoky Mountains	Anza-Borrego State Park	Honolulu, HI	Greece

Feedback?

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