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STATISTICS & ACTUARIAL SCIENCE

FALL 2023

From the Chair

Dear Friends of the Department of Statistics and Actuarial Science,

Greetings to all of you!

Last year was special as we celebrated the 50th series of Hogg and Craig Lectures by hosting a two-day 50th festival. Many alumni and friends returned to Iowa City to celebrate with us. The Hogg and Craig Lecture Series is the longest such lecture series sponsored by a statistics department in the country. Dr. Dan Nettleton was the 50th Hogg and Craig lecturer. Dan is a distinguished alum, who is currently the chair of the Department of Statistics at Iowa State University.



Kung-Sik Chan

Besides Dan’s lectures, the festival also featured graduate student posters, two panel discussions, and two sets of research talks. The first panel discussion was on “Hot Topics in Actuarial Science” featuring four distinguished alumni: Barbara Hogg (moderator), David Dillon, Andy Ferris, and Larry Lickteig. The second panel discussion centered on “Paths to Becoming a Successful Data Scientist” featuring six distinguished alumni: Hai Liu (moderator), Levent Bayman, Yeh-Fong Chen, Rui Jin, Zhijiang Van Liu, and Bo Wang. The first set of research talks showcased faculty research presented by Lan Luo, Sanvesh Srivastava, Luke Tierney, Zhiwei Josh Tong, Boxiang Wang, and Xinyu Zhang. The second set of talks featured distinguished alumni including Subhashish Chakravarty, Kun Chen, Aaron Christ, Dai Feng, and Congrui Yi.

There was so much fun during the 50th Festival — fun brought forth by the reunion of old friends and intellectual stimulation from the talks. The success of the Hogg and Craig Lectures – The 50th Festival owed to the hard work of so many people: all the speakers and panelists, in particular Dan Nettleton for his two engrossing Hogg and Craig lectures, the alumni who came back to Iowa City from afar, the students, the staff, and the faculty. In particular, I want to thank Boxiang Wang and Tammy Siegel for their superb organization.

Great news about our faculty: Elias Shiu was recently named a Collegiate Fellow by the College of Liberal Arts and Sciences, in honor for his record of sustained productivity and distinction. Dale Zimmerman was elected an IMS Fellow for his development of fundamental theory and methodology associated with spatial statistics and outstanding editorial service to the profession. Erning Li was promoted to associate professor of instruction. We are proud of their achievements!

We are excited to announce three new faculty members, in alphabetical order: Alex Liebrecht, Andrew Thomas, and Nathan Wikle. Alex is a lecturer. He is a fresh alum as he just received his PhD in statistics from Iowa in the summer. His research interests

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From the Chair cont'd.

include spatiotemporal statistics and statistical computing. Andrew is an assistant professor. He received his PhD in statistics from Purdue University in 2021. Before joining the department, he was a postdoctoral associate at Cornell University. His research interests include topological data science, machine learning, and stochastic processes. Nathan is an assistant professor. He received his PhD in statistics from Pennsylvania State University in 2021. Prior to joining us, he was a postdoctoral research fellow at the University of Texas, Austin. His research interests include causal inference, Bayesian modularization, spatiotemporal point processes, and environmental statistics. It was an outstanding year of faculty recruitment!

We regret the departure of two faculty members in the last academic year. Associate Professor Ambrose Lo returned to Hong Kong for private practice. Assistant Professor Lan Luo left the department for a position in the Department of Biostatistics and Epidemiology, Rutgers University, in order to be closer to her fiancé. We wish Ambrose and Lan all the best in their new endeavors.

Some exciting news about student education and learning:

The Society of Actuaries (SOA) has granted us University-Earned Credit (UEC) status for four exams: FM (ACTS:3080), FAM (ACTS:4130 & 4150), ALTAM (ACTS:4280), and SRM (STAT:4560 & 4561). To obtain UEC exemption for an exam, a student must score at least 85 percent in the corresponding university course(s). The UEC status is a feather in the cap of our esteemed actuarial program. The department is organizing a series of mini bootcamps in the fall semester, including a data wrangling bootcamp, a design/analysis bootcamp, a business communication bootcamp, and a datathon. These events are aimed at helping students bridge the gap between theory and industrial practice.

We have recently established an Actuarial Lab where senior actuarial students serve as lab assistants, providing peer learning support to students taking various actuarial and statistics courses. Currently, there are nine lab assistants. They gain unique experiential learning by supporting their fellow students.

If you're coming to Iowa City, please drop by Schaeffer Hall so we can catch up.

Sincerely,



Kung-Sik Chan
Robert V. Hogg Professor and Chair

At right: Department of Statistics and Actuarial Science Faculty, Schaeffer Hall, Iowa City, September 19, 2023. **Row 1:** Joyee Ghosh, Haley Jeppson, Erning Li, Osnat Stramer, Kung-Sik Chan, Boxiang Wang. **Row 2:** Zhiwei Josh Tong, Elias Shiu, Joe Lang, Sanvesh Srivastava, Nariankadu Shyamalkumar. **Row 3:** Aixin Tan, Nathan Wikle, Dale Zimmerman, Andrew Thomas. **Row 4:** Matt Bognar, Alex Liebrecht, Luke Tierney.



Faculty News

In July 2023, **Elias Shiu** visited the University of Lausanne, Switzerland, and attended the Colloquium on Risk Theory in Honor of Professor Hans U. Gerber's 80th Birthday. He gave a talk titled "Actuarial Approach to Pricing Exotic Options: From Esscher Transform and Adjustment Coefficient to Barrier Options."

Also in 2023, **Elias** was named a Collegiate Fellow in the UI College of Liberal Arts and Sciences for his exceptional contributions in teaching, scholarly and creative work, as well as leadership in service to the university, college, and department.



Elias Shiu



Dale Zimmerman received his IMS Fellow award from IMS President Peter Buhlmann at the Joint Statistical Meetings in Toronto in August 2023.

Dale Zimmerman was named a 2023 Institute of Mathematical Statistics (IMS) Fellow. He was selected for his development of fundamental theory and methodology associated with complex spatial, spatiotemporal, and longitudinal data and applications to optimal spatial sampling, health data geoprivacy, and environmental statistics; and for outstanding editorial service to the profession.

Dale also gave the keynote address at the iid2022 conference in Huntsville, Alabama, and gave talks at the Western North American Region (WNAR) of the International Biometric Society meetings in Anchorage, Alaska, and at the Joint Statistical Meetings in Toronto, Ontario, Canada.

Joe Cavanaugh, professor and head of the Department of Biostatistics in the College of Public Health, received the 2023 Regents Award for Faculty Excellence from the Board of Regents, State of Iowa, who selected him as one of six UI faculty members to be honored for their extraordinary contributions and sustained record of excellence in teaching, scholarship, and service.



Joe Cavanaugh

Faculty Spotlight

Andrew Thomas

Andrew joined the Department of Statistics and Actuarial Science as an assistant professor in August 2023.

Tell us about your education and what brought you to the University of Iowa.

I received my PhD at Purdue and did my postdoc at Cornell University. I did my undergraduate degree at the University of Minnesota, Twin Cities. I came to Iowa for a variety of reasons. It's a great department and the people are very welcoming and kind. Iowa City also has a lot to offer in a mid-sized city in terms of culture and events. We've attended both film and pelican festivals around town (large numbers of American White pelicans migrate through Iowa on their way south). It also feels like home. I am from Minnesota, I have a lot of family in Wisconsin, and my wife is from Colorado, so getting to all these places is very manageable here.

Tell us about your research interests and why you are passionate about this topic.

My research primarily focuses on topological data analysis (TDA), and its statistical and probabilistic manifestations. I think this is a great topic for a bunch of reasons. There is fascinating mathematics involved from the probability side and surprising performance of TDA methods on the statistical side. TDA provides a common theme for me to weave together a research program which involves things ranging from probability theory to applied statistics. Being able to prove theorems and gain fundamental understanding while also having an impact on concrete problems that advance broader scientific knowledge is a great privilege.

Who has had the most influence on your career or research?

Certainly my mentors — my PhD advisor, Takashi Owada, and my postdoc advisor, David Matteson — have had a big impact on my career. They've really provided me with great support and encouragement. People whose research is imbued with joy and maybe even whimsy, like Persi Diaconis, or those like Sayan Mukherjee whose research straddles both very theoretical and applied, are people who I admire very much.

What do you like most about teaching students?

I think it's really great to have the opportunity to get students interested in things and develop passion



for subjects that you too are passionate about. Learning for the purpose of teaching is also the best way to develop mastery of a material. You've achieved fluency, and it's as if it's now your native tongue. Then you can construct content that conveys that knowledge in a manner that allows students to see the world in a way they never did before and feel empowered to keep learning. It can be a tremendously rewarding feeling.

What advice would you offer to students who would like to pursue a career in your field?

Be curious and be stubborn. On the other hand, though this is somewhat contradictory, you should know when to compromise and know when to move on. Maintaining this balance is essential, though I can't always say I achieve it. Curiosity is always nonnegotiable though.

How do you like to spend your free time?

I enjoy reading about all sorts of subjects, especially about nature/environment these days. My wife and I like to bird and hike (often with our dog, Fern); I also enjoy making and drinking coffee/espresso drinks. We volunteered this fall collecting seeds at a local prairie. We also started curling last year and hope to continue this at the club up in Cedar Rapids.

Faculty Spotlight

Nathan Wikle

Nathan joined the Department of Statistics and Actuarial Science as an assistant professor in August 2023.

Tell us about your education and what brought you to the University of Iowa.

I received my BS in mathematics from Truman State University in Kirksville, Missouri. While at Truman State, I developed an interest in statistical ecology. At the same time, I joined some undergraduate research projects and found that I really enjoyed research! A graduate degree in statistics was an easy way to combine these interests, and I ended up receiving a PhD in statistics from Pennsylvania State University. After a subsequent postdoc in the Statistics and Data Science Department at the University of Texas, I was lucky enough to join the faculty at Iowa! I'm thrilled to be here — the Statistics Department and University provide outstanding opportunities and support for research, and the faculty and students have been wonderful, all with the added bonus of being close to family in Iowa and Missouri.

Tell us about your research interests and why you are passionate about this topic.

At the moment, my research is focused on (i) modeling spatial and spatio-temporal stochastic processes, (ii) developing new methodologies for causal inference, and (iii) applying my research to problems in environmental science, epidemiology, and ecology. I love thinking about physical or biological processes that vary across space and time — examples include air pollution transport, infectious disease dynamics, and lake ecosystems — and trying to develop methods that allow us to better understand the components and uncertainty in the system. And if we can go a step further and understand the interactions between humans and these complex processes, the better prepared we are to propose effective policies — perhaps limiting the harmful impact of air pollution on human health, the spread of an infectious disease, or the consequences of agricultural runoff on lake ecosystems.

Who has had the most influence on your career or research?

My PhD advisor, Ephraim Hanks, and postdoc advisor, Cory Zigler, have been the most amazing mentors. They are both incredible scientists, and more importantly, even nicer people. I often find myself trying to emulate their problem-solving



skills, and hope to one day be as gifted of a scientific communicator as them. I'm also blessed to be part of a family that has always valued education and learning, and I'm very thankful for their years of support and encouragement.

What do you like most about teaching students?

It's exciting to be around so many energetic students every day. More than anything, I love learning about the diverse interests of the students, and I do my best to encourage connections between what we talk about in class and the students' individual passions.

What advice would you offer to students who would like to pursue a career in your field?

If you're an undergraduate student, try to get involved in research! It's one of the best ways to decide if you'd like to apply to a graduate program, and as a bonus, you'll get to meet and interact with other students and scientists who are really smart and passionate about their research. Even if you end up deciding a career in academia is not for you, it's still a résumé booster, and allows you to practice communicating and collaborating with a diverse group of people. If you're a graduate student, keep asking questions and knocking on faculty members' doors. The more connections you can make as a student, the better!

How do you like to spend your free time?

I love spending time outdoors (hiking, camping, biking, etc.) when the weather permits (I'm excited to explore the many beautiful parks in the Upper Midwest)! Otherwise, it's hard to turn down a relaxing evening spent reading or catching up on the latest TV with my wife.

Faculty Spotlight

Alex Liebrecht

Alex joined the Department of Statistics and Actuarial Science as a lecturer in August 2023.

Tell us about your education and what brought you to the University of Iowa.

I went to undergrad at University of Illinois in Urbana-Champaign. Afterward I did a master's at Illinois State University where I met my loving wife, Paige! After grad school, I taught high school in Des Moines for four years where I developed even more enthusiasm for teaching statistics. I decided that I wanted to exclusively teach at the university level, and between Iowa State University and University of Iowa, it was an easy choice.

Tell us about your research interests and why you are passionate about this topic.

I am mostly interested in environmental and spatial statistics. My wife is studying to be a geoscientist, so I have gotten to know a lot of the professors in that department quite well. It has been fun to talk with a lot of them about statistics, and we plan on working on some papers together in the future. Bringing my statistics knowledge to geoscience in a way where I feel like I can do something about the climate crisis is extremely motivating.

Who has had the most influence on your career or research?

Obviously, this is my two advisors — Dr. Kate Cowles and Dr. Sanvesh Srivastava. Without the two of them, my career at University of Iowa would not be possible.

What do you like most about teaching students?

The ultimate reason I love to teach is because I love to pay my gifts forward by finding and communicating knowledge in my lifelong effort to inspire future generations of scientists and statisticians. The “story” of statistics is one of my favorite stories to tell — it just takes about 15 weeks to tell the story!



What advice would you offer to students who would like to pursue a career in your field?

I would advise students to find someone or something that inspires them about the field and go for it! Remember that your career is a marathon and not a sprint! It can be overwhelming at first with how many choices there are on different topics to learn, but take your time and find something that you love.

How do you like to spend your free time?

I love this question! As far as my hobbies go — I really like biking. My wife and I even did RAGBRAI for our honeymoon! We thought if we can make it through biking across Iowa together, we would be ready for most obstacles. More recently, I just got into mountain biking, and it has been fun to work on my fitness and learn new skills. As we move closer to winter, I enjoy snowboarding, snow-skiing, and playing video games of all kinds!

New Associates and Fellows

Congratulations to the following Iowa alumni who became Fellows or Associates of the Society of Actuaries and Fellows or Associates of the Casualty Actuarial Society!

SOCIETY OF ACTUARIES - Fellows (FSA)

December 2023 - Samuel Werner (BS 2019)
 August 2023 - Wan Row Ang (BS 2011)
 August 2023 - Yi Cao (MS 2012)
 August 2023 - Emily Fishel (BS 2021)
 August 2023 - Arpit Mehta (MS 2015)
 June 2023 - Ga Youn Amy You (MS 2005)
 March 2023 - Jusuf Abbas Bawazer (MS 2010)
 March 2023 - Anthony Paul Dagner (BS 2017)
 March 2023 - Christine Marie Hunt (BS 2017)
 March 2023 - Tao Li (MS 2015)
 March 2023 - Yidai Yao (BS 2016)

SOCIETY OF ACTUARIES - Associates (ASA)

October 2023 - Angela Fiore (BS 2020)
 October 2023 - Sean Godkin (BS 2019)
 October 2023 - Ankita Hasija (2019)
 October 2023 - Joseph Vize (BS 2022)
 August 2023 - Jason Dedas (BS 2020)
 June 2023 - Philip Foti (MS 2021)
 June 2023 - Nicole Gonner (BS 2019)
 June 2023 - Mason Newhard (BS 2020)
 June 2023 - John Rottinghaus (BBA 2016)
 June 2023 - Andrew John Sherwin (BS 2021)
 June 2023 - Yichi Zhang (MS 2014)
 May 2023 - Xuan Yun Chan (BS 2017)
 April 2023 - Cody Borst (BS 2017)
 April 2023 - Kevin Cai (BS 2019)
 April 2023 - Alec Ciaccio (BS 2020)
 April 2023 - Joseph Delay (BS 2015)
 April 2023 - Andrew Doyle (BS 2020)
 April 2023 - Emily Hay (BS 2020)
 March 2023 - Michelle Croghan (BS 2018)
 March 2023 - Bryan David Frost (BA 2018 Math & Asian Languages)
 January 2023 - Huan Wang (MS 2013)
 December 2022 - Collin Abeln (BS 2019)
 December 2022 - Pui Shan Lai (MS 2019)

CASUALTY ACTUARIAL SOCIETY- Fellows (FCAS)

2023 - Carter Burns (BS 2019)
 2023 - Joel J. Fitzgerald (BBA, BA Psychology 2010)
 2023 - Matthew Kulczak (BS 2019)
 2023 - Michael Olczyk (BS 2014)

CASUALTY ACTUARIAL SOCIETY - Associates (ACAS)

2023 - Jason McDowell (BS 2018)

Career Fair

This year 34 companies came to our Actuarial Science, Insurance & Risk Management Career Fair held at the Iowa Memorial Union on October 12, 2023. Over 120 students attended this fair to learn more about the opportunities these fine companies offer. In the following days and weeks, many had follow-up interviews seeking internships and job opportunities. We are so appreciative for the wonderful support and organization by the Pomerantz Career Center team to make this such a successful event.

Thank you to the companies attending the 2023 Career Fair!

Allianz Life
 American Equity Investment Life Insurance Co.
 Aon
 Assurance, a Marsh & McLennan Agency
 Athene USA
 BITCO Insurance Companies
 Captive Resources, LLC
 CNA Insurance
 Cottingham & Butler
 Country Financial
 Emergent Holdings
 F&G Annuities & Life
 Farm Bureau Financial Services
 Fidelity Investments
 Gallagher
 Global Atlantic Financial Group
 Holmes Murphy & Associates
 IMT Insurance
 Kunkel & Associates, Inc.
 Lockton
 National Indemnity Company
 New York Life Insurance Company
 Northwestern Mutual - Eastern Iowa
 Old Republic International
 Pacific Life
 Principal Financial Group - Corporate Headquarters
 Sammons Financial Group
 Sentry
 The Accel Group
 Transamerica
 Travelers
 TruStage
 UFG Insurance
 W. R. Berkley

Hogg and Craig Lectures – The 50th Festival

On April 28-29, 2023, our department celebrated the **50th year of the Hogg and Craig Lecture Series** with a festival featuring two lectures by Dr. Dan Nettleton of Iowa State University; research talks on Emerging Topics and Practice in Data Science; panel discussions on Hot Topics in Actuarial Science; Departmental Faculty Research Showcase; poster session featuring current graduate students; panel discussions on Paths to Becoming a Successful Data Scientist; as well as an awards ceremony, banquet dinner, and the annual Hogg and Craig Cake! Dr. Nettleton gave his talks on “My Adventures in Sports Statistics, Beginning with Bob Hogg” and “Who Is Winning? Determining Whether a Candidate Leads in a Ranked-Choice Election.” For more information on the 50th Festival including the full abstracts and panel transcripts, along with all of the other Hogg and Craig lectures, visit <https://stat.uiowa.edu/hogg-and-craig-lectures>.



Hogg and Craig 50th Festival attendees – Row 1: Dan Nettleton, Erin Post, Olivia Frazier, Sreya Sarkar, Yilin Wang, Qian Tang, Barbara Hogg, Sanvesh Srivastava, Serena Tiong, Elias Shiu. **Row 2:** Lyle Paukner, Ling Zhang, Yeh-Fong Chen, Yiran Zeng, Kun Chen, Kung-Sik Chan, Hai Liu, Tianrun Wang, Tammy Siegel, Aaron Christ. **Row 3:** Zhen Wang, Kai Wang, Alex Zajichek, Russ Lenth, Mike Jones, Dale Zimmerman, Luke Tierney, Dai Feng, Levent Bayman. **Row 4:** Bo Wang, Rui Jin, Aixin Tan, Congrui Yi, Shamriddha De, Boxiang Wang, Zhiwei Josh Tong, Javier Porras, Laura Clymore Ellman, Yikai Zhang, Collin Nill, unknown. **Row 5:** Shiao Liu, N.D. Shyamalkumar, Beth Hanson, Lan Luo, Xinyu Zhang, Matt Bognar, Ting-Hung Yu, Subhashish Chakravarty, Fei Wu, Zhijiang Van Liu.

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Left: Kung-Sik Chan presented Hogg and Craig lecturer Dr. Dan Nettleton with a gift from the department at the 50th Festival on April 28, 2023.

Right: Panelists discussed “Paths to Becoming a Successful Data Scientist” at the 50th Festival on April 29, 2023.



Department News

The **Actuarial Lab** is a student organization in our department that serves students and is led by students. The Lab provides assistance with coursework, shares learning strategies, and introduces resources to help students succeed. More specifically, it offers support in three subject areas: Financial Mathematics (ACTS:3080), Fundamentals of Actuarial Mathematics (ACTS:4130), and Mathematical Statistics (STAT:3100 and 4100). The Lab is truly about students, from students to students. The tutors in the Lab are upper-class actuarial students, most of whom have passed multiple actuarial exams and are on track to becoming actuaries. They have done tremendous work to keep this Lab running and constantly improving. The current leader is Nathan Munshower, who is a senior actuarial student graduating next May. Nathan has been helping coordinate the Lab and is maintaining a YouTube page where he creates videos on difficult or commonly asked-about topics. Another tutor, Bryce Serovy, a senior student who graduated in December, shared his heartfelt feelings about working as a tutor in the Lab: “Being an instructor for the Lab has been so rewarding, as I feel I am making a positive difference in many of my peers’ education. Answering questions about lecture material, going through practice problems, and aiding with homework really enhance the students’ knowledge and concurrently develop my understanding of topics. Many of the students who seek help from the Lab appreciate the extra assistance before upcoming midterms and finals. I am thrilled to be a part of this Lab and the difference it makes within the Actuarial Science major at Iowa.” We would like to express our sincere gratitude to **Principal Financial Group** for generously providing funding support for student development, which is the financial resource for the Lab.

We are thrilled to share the success of our recent **Datathon** event hosted by the University of Iowa Department of Statistics and Actuarial Science and made possible through the generous sponsorship of **Transamerica**. Thank you for championing innovation and education of the next generation of data scientists! Twenty-two talented graduate and undergraduate students in data science and statistics showcased their analytical prowess, tackling the challenge of “Strategic Screening: Developing a Predictive Model for Chronic Hepatitis B Infection Using Reliable Patient Data.” Huge congratulations to the stellar teams: Team “Predictive Pioneers” for clinching the Top Prize; Team “Data Divers” for winning Best Data Visualization; and Team “The Misfits” for securing the title of Best Data Collection. Heartfelt gratitude to all participants, industry experts, and faculty who served as judges (Boxiang Wang, Duncan Leaf, Sai Kumar Popuri, Sanvesh Srivastava) and event organizers (Aixin Tan, Boxiang Wang, Kung-Sik Chan, Sanvesh Srivastava) for making this Datathon a resounding success. The Datathon event concludes the semester-long sequence of bootcamps that provides students with extra practical training in data wrangling, survey data, and business communication. Great thanks to the participants and the bootcamp coaches (Ruitao Liu, Duncan Leaf, Paul Hampton). Your dedication to shaping the future of data professionals is truly appreciated!

Student Graduates

DECEMBER 2022 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

PRIMARY PROGRAM, ACTUARIAL SCIENCE

Brett King

BS Actuarial Science, BA Mathematics, Risk Management and Insurance Certificate

Shuqiong Liang

BS Actuarial Science, BA Mathematics, BS Statistics (Mathematical Statistics)

Sricharan Sheshashai

BS Actuarial Science, Asian Languages and Literature Minor, Mathematics Minor, Risk Management and Insurance Certificate

Yue Yang

BS Actuarial Science, BA Mathematics

PRIMARY PROGRAM, STATISTICS

Tingxuan Li

BS Mathematics, BS Statistics (Mathematical Statistics)

Alex Pirolo

BS Statistics (Statistical Computing and Data Science)

MAY 2023 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

PRIMARY PROGRAM, ACTUARIAL SCIENCE

Charles Douglas Barry

BS Actuarial Science, BS Mathematics

Ryan Theodore Becker

BS Actuarial Science

Trey Jefferson Cobb

BS Actuarial Science, Computer Science Minor, Mathematics Minor

Alejandro Javier Guzman

BS Actuarial Science, BA Mathematics

Peyton Michelle Hanley

**BS Actuarial Science, *BS Statistics (Mathematical Statistics), Mathematics Minor*

Andrew Yeong Jin Herkelman

BS Actuarial Science, Business Administration Minor, Mathematics Minor, Statistics Minor, University Honors

Hoa Trang Luu

*BS Actuarial Science, *BA Mathematics, Statistics Minor*

Dalton Nesheim

BS Actuarial Science

Madison Marie Rambo

**BS Actuarial Science, *BS Mathematics, University Honors*

Guy Renquist

*BS Actuarial Science, *BBA Finance, Mathematics Minor*

Ethan David Sauser

BS Actuarial Science, BS Mathematics

Jacob Thomas Smith

BS Actuarial Science, BS Mathematics, Computer Science Minor

Ethan Russell Verwers

BS Actuarial Science, Mathematics Minor, Philosophy Minor

Maxwell Grant Zoss

**BS Actuarial Science, *BA Mathematics, *BS Statistics (Mathematical Statistics)*

PRIMARY PROGRAM, STATISTICS**Rachel Anderson**

(UI H) BS Statistics (Business, Industry, Government and Research), (H) BS Mathematics, French Minor

Esmee Sietske Belzer

**BS Statistics (Mathematical Statistics), *BS Chemistry*

Justin Robert Bowker

BS Statistics (Mathematical Statistics), BA Mathematics

Austin Lee Cochrane

BS Statistics (Mathematical Statistics), BA Mathematics, Risk Management and Insurance Certificate

Peter James Glodosky

BS Statistics (Business, Industry, Government and Research), BA Mathematics

Mitchell John Hermon

BS Statistics (Statistical Computing and Data Science), BS Computer Science, BA Mathematics

Xiaoya He

BS Statistics (Mathematical Statistics), Psychology Minor

Zixiao He

BS Statistics (Business, Industry, Government and Research)

Brynn Marie Holzwarth

BS Statistics (Business, Industry, Government and Research), Music Minor, Criminology, Law and Justice Minor

Yutong Jin

BS Statistics (Mathematical Statistics), BA Mathematics

Student Graduates cont'd.

Michael George May

(UI H) BS Statistics (Mathematical Statistics), (H) BA Mathematics

Cade Joseph McDonald

BS Statistics (Statistical Computing and Data Science), BS Mathematics

August Ray Muenzenmay

BS Statistics (Mathematical Statistics), BS Computer Science

Ethan Lane Murra

***BS Statistics (Statistical Computing and Data Science), ***BS Mathematics, Computer Science Minor

John Joseph Plaszynski

(H) BS Statistics (Statistical Computing and Data Science), (H) BS Computer Science

Jenna Aziza Salliman

*BS Statistics (Mathematical Statistics), *BA Music (Performance - Piano)

Jude Morgan Carlyle Shelton

BS Statistics (Business, Industry, Government and Research), BA Mathematics

PRIMARY PROGRAM, DATA SCIENCE

Daniel Gordon Drake

***BS Data Science, ***BS Economics

Paul Kahler

BS Data Science, BA Mathematics

Archie Almy Kipp

BS Data Science

Yiqi Liu

BS Data Science

Jacob Michael Schutt

BS Data Science, BA Mathematics

Aubrey Lauren Vantiger

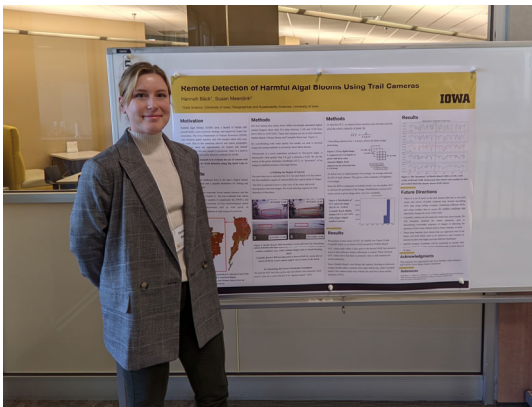
BS Data Science, BA Dance

Kefeng Xiao

BS Data Science

*** With Highest Distinction
 ** With High Distinction
 * With Distinction
 (H) Honors in the Major
 (UI H) University of Iowa Honors

Student News



Data science student **Hannah Back** presented her work on March 29, 2023, at the Spring Undergraduate Research Festival (SURF) co-hosted by the Iowa Center for Research by Undergraduates (ICRU), the Office of the Vice President for Research, and the Office of the Provost.



On May 2, 2023, statistics student **Drew Dupont** (pictured here with Herky and Elias Shiu) received a Student Employee of the Year—Certificate of Distinction at the Career Impact Awards, presented by the Pomerantz Career Center. In addition, the Department of Statistics and Actuarial Science was selected as one of the Highly Engaged Academic Departments!

PhD Graduates

ALEXANDER LIEBRECHT

Alex's PhD in statistics was conferred on August 4, 2023. His thesis is "Bayesian Hierarchical Modeling and Prediction of Zero-Inflated Continuous-Valued Data Using Two Environmental-Monitoring Networks" and his advisors were Kate Cowles and Sanvesh Srivastava. He is now working as a lecturer in the Department of Statistics and Actuarial Science at the University of Iowa.

SHIAO LIU

Shiao's PhD in statistics was conferred on May 13, 2023. His thesis is "Error Analyses of Deep Generative Models" and his advisor was Jian Huang. He is now in a fellowship at Harvard University in Cambridge, Massachusetts.

ZHEN WANG

Zhen's PhD in statistics was conferred on May 13, 2023. His thesis is "Bayesian Finite Mixture Regression Models with Cluster-specific Variable Selection" and his advisor was Aixin Tan. He is now working as a data scientist at Liberty Mutual Insurance in Seattle, Washington.

FEI WU

Fei's PhD in statistics was conferred on August 4, 2023. His thesis is "Topics in Matrix Time Series Analysis" and his advisor was Kung-Sik Chan. He is now working as a visiting associate at the US Food and Drug Administration in Silver Spring, Maryland.

MS Graduates

MASTER OF SCIENCE GRADUATES IN ACTUARIAL SCIENCE 2022-23:

Aidan Pierce Chaffin, Thao Vy Dang, Siyu (Steven) Jiang, Anna Lorraine Kline, Tianrun Wang

MASTER OF SCIENCE GRADUATES IN STATISTICS 2022-23:

Sam Dannels, Shamridha De, Zhenhan Fang, Ian Hultman, Chenyang Li, Ian James Lundy, Phuong Anh Nguyen, Collin McNary Nill, Sreya Sarkar, Nathan Tansey, James Charles Thomas, Yilin Wang, Ting-Hung Yu

New Actuarial Science Majors

Due to the demanding nature of the actuarial science major and the difficulty of the professional examinations, the department maintains a selective admission program for actuarial science. Students must apply and be admitted to the major. Congratulations to the following students who were admitted into the undergraduate actuarial science major in 2023.

January 2023: James Albright, Lucas Isaac, Nathan Reed, Christie Rus, Jun Zhang

June 2023: Avelyn Burger, McKayla Doyle, Riley Fuhs, Belle Martin, Joe Miyazaki, Joshua Nguyen, Ethan Osborn, Abhishek Sen, Carley Youngquist

August 2023: Ardan Hallett, Maggie Russ



Undergraduate Spotlight

Liam Christensen

Liam will graduate in May 2024 with a BS in actuarial science and a certificate in risk management and insurance. Having worked as an intern at Principal Financial Group in Des Moines, he will be joining the company full-time as an actuarial assistant once he graduates. Liam has been a tremendous asset to the Actuarial Science Club, and his leadership has allowed the club to flourish. Thank you, Liam!

Tell us more about you and why you chose to come to the University of Iowa.

I grew up just outside of Des Moines in Indianola, Iowa, and have always been a Hawkeye — both my parents and lots of extended family studied at the University of Iowa. I knew I wanted to study actuarial science, and Iowa's track record of producing successful actuaries made it an easy choice.

As the Actuarial Science Club president, what can you tell us about this position that isn't in the description?

One big part of being president that isn't in the description is all the opportunities to interact with others. In my position I've had the chance to get to know actuaries and recruiters from a variety of companies that hire students from Iowa. I've also had the opportunity to give advice to other actuarial students on a variety of topics, which has been one of my favorite parts of being president.

What is the key to success in this position?

Organization. As the president, I take charge in coordinating a lot of events for the club, and still have a hand in many things that I'm not directly in charge of. It wasn't easy, but improving my organizational skills has been essential to managing club activities on top of classes, exams, and work.

What are some of the challenges you have faced as club president?

My time as club president has gone smoothly, but the biggest challenge I've faced is coming up with new ideas for the club to ensure it provides as much value to students as possible, along with coordinating events during the busy fall recruitment season.



What excites you about your new career, and where do you see yourself in three years?

The thing that I find the most exciting about my new career is just how many opportunities there are as an actuary. Especially at a company like Principal, there are a variety of roles for an actuary to fill, and I know I'll be able to find one where I can provide a lot of value and enjoy what I'm doing. In three years, I will likely be in my second rotation at Principal and will hopefully be close to being an FSA!

What do you like to do in your spare time?

I enjoy running, lifting weights, reading, and golf.

What is on your bucket list?

One of the biggest items on my bucket list is to visit every National Park. I also want to run a marathon and become a decent guitar player.

Student Awards and Scholarships

STUDENT AWARDS

Our annual student awards were announced in April 2023.

The **Allen T. Craig Award** for outstanding teaching assistant was presented to Erin Post.

Lloyd A. Knowler Award for Outstanding Achievement in Actuarial Science

Tianrun Wang

We also presented several **Robert H. Taylor Awards** for academic achievement in actuarial science. Prize money totaling \$9,240 was distributed among this year's recipients:

Taylor-Cosby Award for outstanding performance in ACTS:3080

Nathan Munshower and Yan Shen

Taylor-Craig Award for outstanding performance in ACTS:4130

Andrew Dupont and Yan Shen

Taylor-Knowler Award for outstanding performance in ACTS:4280

Liam Christensen and Tianrun Wang

Taylor Award in Actuarial Stochastics

Tianrun Wang



Mark your calendar for March 27, 2024!

<https://1day.uiowa.edu>

STUDENT SCHOLARSHIPS

Scholarships totaling \$383,850 were awarded to several students in the 2023-24 academic year. Included among these were several named scholarships:

Athene Scholarship

2023-24: Andrew Dupont, Nathan Munshower

Lloyd A. Knowler Scholarship

2023-24: David Roth

Nevermann Scholarship

2023-24: Riley Fuhs

Richard D. Pearson Scholarship

2023-24: James Albright, Joshua Nguyen

Principal Financial Group Scholarship

2023-24: Arden Hallett, Joshua Nguyen, Christie Rus

Transamerica (AEGON) Scholarship

2023-24: Joseph Miyazaki, Ethan Osborn

Charles E. and Eleanore G. Wilson Scholarship

2023-24: Annas Ahmed, Dane Allen, Amanda Ben, Tate Billmeyer, Ethan Bovee, Avelyn Burger, Kael Christensen, Liam Christensen, Andrew Dupont, Kaitlyn Elliott, Riley Fuhs, Anthony Galusha, Arden Hallett, Emma Kajtazovic, Patrick Keating, Jack Klemesrud, Alex Ling, Isaac Lucas, David Markusic, Belle Martin, Joseph Miyazaki, Nathan Munshower, Ethan Osborn, Henry Pollard, Samuel Reckamp, Nate Reed, Lucas Regina, Jacob Roth, Christie Rus, Margaret Russ, Brice Sandahl, Abhishek Sen, Bryce Serovy, Maxwell Shumaker, Luke Stuedemann, Ian Temple, Nolan Temple, Nathan Van Witzenburg, Ryan Venem, Lucas White

Statistics Departmental Scholarship

2023 (Spring): Daniel Drake, Cori Ann Grant, Cade McDonald, Ethan Murra

2023 (Fall): Lawrence Deng, Kelsey Law, Lucas Regina, Carter Tams

Graduate Spotlight

Olivia Frazier

Olivia earned her BS in mathematical economics and political science from the University of Richmond in Virginia. She will graduate with an MS in data science from the University of Iowa in December 2023. An award-winning field hockey player at the University of Richmond, Olivia joined the Iowa Hawkeyes as a graduate student and was recently selected to compete at USA Field Hockey's 2023 U21 and Development Selection Camp. Upon graduation, Olivia will join the EPA as an exposure modeling technician in Research Triangle Park, North Carolina.



Tell us about you and why you chose to come to the University of Iowa.

I chose to come to the University of Iowa due to the combination of the university's strong history in both the statistics program and field hockey.

You started in statistics but switched to data science – what made you change your major?

I actually originally was looking to get a master's in data science; however, there were few universities that had both a field hockey program and a data science master's program, so I decided to apply to statistics and just take a more applied focus. When Iowa added the master's in data science, I was so excited, so I switched almost immediately. My college major was in mathematical economics, which made me interested in the applied side of mathematics. Discovering the data science master's program excited me as it aligned better with my interest in the practical applications of statistics.

As part of the first class of MS graduates in data science at Iowa, what have you enjoyed most about the program?

Being part of the first class of MS graduates in data science at Iowa, I have thoroughly enjoyed the program's integration with the statistics program. The balance between theory and applications has been excellent, and I've significantly improved my coding skills.

What is most challenging about completing your MS degree in three semesters?

The most challenging aspect of completing my MS degree in three semesters was staying on top of the workload while also serving as a TA. Despite the challenges, I found the timeframe very doable.

What do you plan to do with your data science degree, and where do you see yourself in three years?

My current plan with a data science degree is to pursue connections between data science and sports. In three years, I envision myself expanding sports analytics by integrating data from wearable technologies.

How is your experience as a student-athlete different as a grad student than as an undergraduate?

As a student-athlete in grad school, I found the difficulty of the material much higher, making it challenging to balance away trips and missing courses. Handling such situations was comparatively easier during my undergraduate years.

What is your favorite memory from your time at Iowa?

My favorite memory from my time at Iowa is beating the #1 ranked Northwestern on their home field.

During your time at Iowa, who or what has inspired you the most?

My teammate Hillary Cox has been the most inspiring person throughout my entire time at Iowa.

What's on your bucket list?

Camping underneath the northern lights in Iceland is on my bucket list.

Graduate Spotlight

Erin Post

Erin received her BS in math and MS in statistics from the University of Iowa, worked as a data scientist for John Deere for several years, then returned to Iowa and will graduate with her PhD in statistics in May 2024. She is the 2023 recipient of the Allen T. Craig Award for Outstanding Teaching Assistant, and a recipient of the Ballard and Seashore Dissertation Fellowship for spring 2024.

Tell us about you and why you originally chose to come to the University of Iowa.

I originally looked at colleges planning to study engineering. I met with someone in the College of Engineering's admissions office and was immediately sold on being part of a small community inside a big university. That was something that I didn't get when I toured other big schools around the Midwest. When I switched to an open liberal arts major before my freshman year, I met with people from a few other departments and still got that sense of community.

What was your work experience like at John Deere, and what made you want to return to Iowa for your PhD?

Working at John Deere was a fantastic experience in so many ways. Even though I'm from Iowa, I didn't grow up around agriculture, so it was really exciting to learn about the technology and decisions that go into farming and to apply my skills to help solve the problems that John Deere's dealers and customers face. There were a lot of situations where I was the only data scientist on a project, so learning to communicate data effectively was important and was one of the biggest things that I carried over when I left to return to school. When I decided to come back to graduate school for a PhD, I knew Iowa was the right choice because of the experience I'd had during my master's. I have always felt really supported by the faculty and staff in our department and have loved the opportunities to teach and work with undergraduate students.

Tell us about the research you are doing for your PhD thesis.

At a high level, I model how population-level variables relate to how that population splits itself into



different sub-groups. For example, I studied how factors like rates of poverty and unemployment in different school districts relate to the number of students who choose to attend a public/private university or community college versus the number who choose to join the workforce or military. I arrange the sub-groups into a tree structure using their existing relationships and hierarchies.

What have you enjoyed most about teaching statistics students?

I love teaching and talking about statistics! The undergrads in our department have really impressed me with their curiosity and excitement, especially when it comes to data science. The biggest joy has been when students email me or come to my office to chat about projects they're working on outside my class or to talk about different avenues to explore in our field.

Tell us about your unique internship experience this past summer.

I spent my last two summers working as a data science intern for a mobile startup called UDisc. The company has about 25 employees who are really passionate about delivering a good product to their customers and growing disc golf globally.

Continued on page 18

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The internships gave me a chance to expand my Python skills, work with large unstructured data, and learn a lot about mobile development. It's really fun to be able to open the app and see features that I helped develop.

What is your favorite memory from your time at Iowa?

More than anything, I really value the friendships that I've formed during my time at Iowa, both in undergrad and grad school.

During your time at Iowa, who or what inspired you the most?

I'm always inspired by the other students I've met during my PhD, both in Statistics and from other departments. It's amazing to learn about both the breadth and depth of the research going on across the university.

What excites you about returning to the workforce, and where do you see yourself in three years?

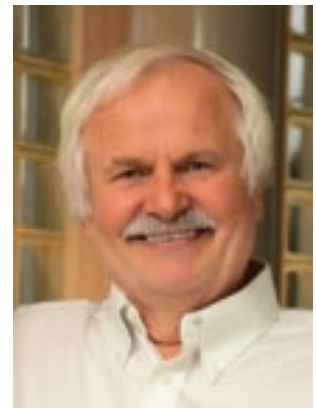
I am really excited to dive into a new company and learn the ins and outs of their products and set of challenges. With that, I'm excited to collaborate with people from all different backgrounds to solve those challenges. In three years, my goal is to move into a leadership role where I'm managing a team and working on shaping the data strategy for an organization.

What's on your bucket list?

Two very unrelated items are currently topping the list: climb Mount Kilimanjaro and be a contestant on *Wheel of Fortune*.

In Memoriam

Professor **Johannes Ledolter** passed away peacefully in his home on November 5, 2023, after battling pancreatic cancer. He was 73 years old. Born in Austria, Hannes joined the University of Iowa in the late '70s with a joint appointment in the College of Business and the Department of Statistics. At the time of his passing, he held the Robert Thomas Holmes Professorship in Business Analytics. He wrote more than 10 books and is the author of more than 150 papers. His scholarly work created more than 9,000 citations and provided him with a Google Scholar H-index of 48. He received the William G. Hunter Award from the American Society for Quality in 2022. He enjoyed teaching at all levels and received the Executive MBA GREAT Instructor of the Year Award in 2000, the Tippie Dean's Teaching Award in 2005, and the Tippie College's Faculty Career Achievement Award in 2023.



According to Dean Emeritus Gary Fethke, "Hannes spent his career at Iowa while accepting occasional appointments at other prestigious universities in the U.S. and Austria. He was a demanding, but caring, teacher of statistics, both applied and theoretical, at the undergraduate and graduate levels. He published widely and consistently, producing with prominent coauthors numerous well-received books and refereed articles. His research productivity, both in breadth and depth, was remarkable. Hannes was a challenging colleague and friend who possessed, and often forcibly expressed, a deep appreciation for what he considered it takes to be a great research university. He was often right." Johannes is survived by his wife Lea VanderVelde of Iowa City, son Thomas of San Francisco, son Jeffrey of Iowa City, and his 97-year-old mother Herta in Austria.

In Memoriam cont'd.***Class of 1940***

Bernice (Bordy) Green
Omaha, NE (BA 1940) died in March 2019

Class of 1944

Frederic Ackerson
Fort Belvoir, VA (BA 1944) died in May 2023

Richard Burstein
Scottsdale, AZ (BA 1944) died in December 2019

Class of 1945

Helen Pollock Groom
Chestertown, MD (BA 1945) died in February 2023

Class of 1946

Mabel (Davis) Aronson
Herman, NE (BA 1946) died in April 2023

Henry Teicher
Edgewater, NJ (BA 1946) died in November 2014

Class of 1948

Arlin Feyerherm
West Point, NE (MS 1948) died in January 2019

Roslyn (Weinberg) Ruthman
Mount Vernon, NY (BA 1948) died in April 2019

Class of 1950

Harold Wiebke
Oceanside, NY (BA 1950, MS 1952) died in August 2021

Class of 1951

Robert Bailey
Murfreesboro, TN (BA 1951, MS 1953) died in October 2020

William Dreher
East Hampton, NY (BA 1951) died in June 2022

William Paul
Hobe Sound, FL (BA 1951) died in March 2022

Class of 1952

Boyd Mast
Minneapolis, MN (MS 1952) died in July 2019

C. David Silletto
Fort Wayne, IN (BA 1952) died in November 2020

Class of 1953

John Beekman
Batavia, OH (BA 1953, MS 1957) died in May 2023

Joseph Antone Cermak
Iowa City, IA (BA 1953) died in February 2023

Class of 1954

Sherwood Smith
Westlake, OH (BA 1954, MS 1959) died in December 2020

Jack Wilson
Asheville, NC (MS 1954) died in March 2021

Class of 1955

Denis Sullivan
Omaha, NE (BA 1955, JD 1957, MS 1964) died in February 2023

Class of 1958

Jeanne (Williams) Enders
Rock Island, IL (BA 1958) died in December 2016

John Roberts
Gretna, LA (BA 1958) died in February 2023

Class of 1959

Craig Ellyson
Morehead City, NC (BA 1959, MS 1962) died in April 2023

Richard Harring
Centennial, CO (BA 1959, JD 1962) died in December 2021

Terry Jenkins
Santa Barbara, CA (MS 1959) died in July 2018

Class of 1960

Ralph Lyle
Santa Clara, CA (BA 1960) deceased date unknown

Raymond Shekoury
Mount Juliet, TN (MS 1960, PhD 1963) died in May 2021

Class of 1961

Edward Sproat
Amelia Island, FL (BA 1961) died in February 2023

Class of 1967

Gerald Selig
Overland Park, KS (MS 1967) died in September 2021

Class of 1971

Yea Shyr Chang
Great Neck, NY (MS 1971) died in November 2017

Class of 1972

Kenneth Lavoie
Littleton, CO (MS 1972) died in September 2022

Class of 1974

Mark Will
Whittier, CA (MS 1974) died in July 2020

Class of 1983

Carmen Oeltjen
APO, Armed Forces Europe/Canada/Middle East/Africa
(MS 1983) died in October 2021

Class of 1985

Rhonda Knehans-Drake
Chesterfield, MO (MS 1985) died in June 2021

Class of 1987

Kathleen Hockenberry
Dublin, OH (MS 1987) died in October 2020

Class of 1989

Lisa Wilkerson
Marion, IA (BS 1989, MS 1996) died in April 2023

Class of 1995

Kay Gutterman
San Diego, CA (BS 1995) died in August 2021

**DEPARTMENT OF
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Thank you - your gifts to the Department of Statistics and Actuarial Science are greatly appreciated!

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The University of Iowa Center for Advancement is an operational name for the State University of Iowa Foundation, an independent, Iowa nonprofit corporation organized as a 501(c)(3) tax-exempt, publicly supported charitable entity working to advance the University of Iowa.

PLEASE NOTE - EMAIL ADDRESS REQUEST:

The Department of Statistics and Actuarial Science would like to send this newsletter to all of our alumni via email in future years. Please send us your current email address to statistics@uiowa.edu. Thank you!