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STATISTICS & ACTUARIAL SCIENCE

FALL 2024

From the Chair

Dear Friends and Alumni of the Department of Statistics and Actuarial Science,

Greetings to all of you! I am delighted to write to you about recent changes and developments within the department.

First, an important change in the admission to the BS program in actuarial science: Effective fall 2024, students will be able to declare an actuarial science major or transfer in as an actuarial science major at the time of admission to the College of Liberal Arts and Sciences (CLAS) at the University of Iowa, or at any time after admission. The Actuarial Science Interest preparatory classification will be discontinued.

The selective admissions policy was established in 1990 at the recommendation of the department due to the popularity and difficulty of the actuarial science major. It is our hope that direct admission may encourage more students to pursue actuarial science, foster a stronger sense of belonging among students, and alleviate some pressure on students and their parents. Additionally, we are offering a yearlong introductory actuarial science seminar course and enhanced student advising to equip first-year students with a solid foundation to succeed in this challenging major.

I am also honored to highlight tremendous news from our alum, David Dillon (MS 1996), who has been elected to serve as the 2024-2025 President-Elect of the Society of Actuaries. David is the sixth UI graduate to become SOA President. We are so proud of his accomplishments!

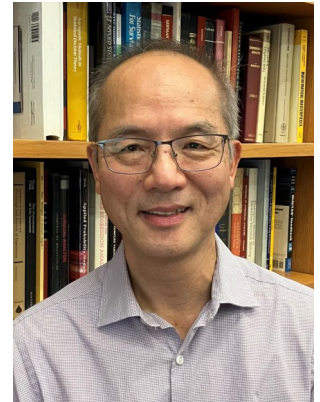
Our graduate student, David Roth, delivered an inspiring commencement address at the 2023 fall College of Liberal Arts and Sciences commencement ceremony, which you may view here¹. David holds a BS in actuarial science and a BA in mathematics. In his address, he emphasized the importance of “being the architect of your own joy” and “shaping the environment around you.” These valuable insights stem from his personal experiences, including his time working at a Casey’s convenience store during high school; see his *Daily Iowan* interview² for details. David is currently a master’s student in our data science program.

Please mark your calendar that One Day for Iowa, the University of Iowa’s 24-hour online giving day, is on March 26, 2025. Any gifts made toward the Department of Statistics and Actuarial Science on One Day for Iowa can help further the department’s missions in education, research, and service. Thank you in advance for your generous support. 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



Kung-Sik Chan

¹<https://www.youtube.com/live/ULRpNOKBaw4?si=XTee7d6ZjI96AOhj&t=940>

²<https://clas.uiowa.edu/news/meet-fall-2023-clas-commencement-speaker>

Faculty and Staff News

Kung-Sik Chan presented a paper on “Change Point Problem with a Matrix-valued Time Series” in the Workshop on Data Science and Statistics, at the Hong Kong Polytechnic University, Hong Kong, on January 10, 2024.

Kung-Sik also gave a talk on “Testing for threshold regulation in presence of measurement error,” on July 5, 2024, in the 4th International Symposium on Time Series Analysis in Guilin, PRC.



Kung-Sik Chan (left) at the 4th International Symposium on Time Series Analysis with Professor Howell Tong (middle) and Dr. Xinyu Zhang (right).



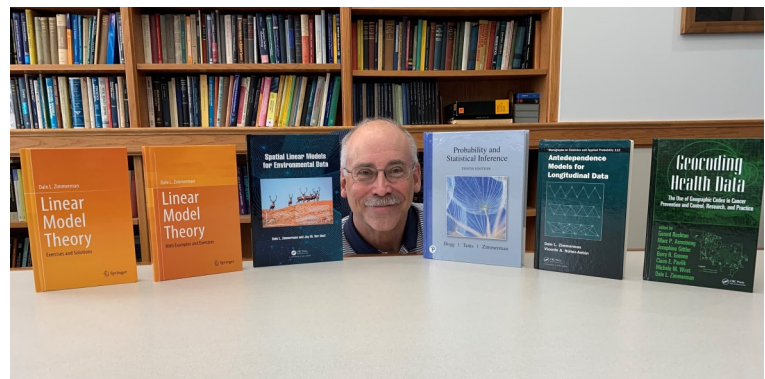
Elias Shiu

In spring 2024, **Elias Shiu** was awarded Doctor of Science, *honoris causa*, by the Hang Seng University of Hong Kong. This is his second honorary doctorate. He was awarded Doctor of Actuarial Science, *honoris causa*, by the University of Lausanne, Switzerland, in 2017.

In August 2024, Elias was one of several UI College of Liberal Arts and Sciences faculty members recognized by students as having pivotal roles in shaping the success of the 2024 graduating class. Graduating students identified Elias as a UI employee who made a difference in their lives in and out of the classroom.

Dale Zimmerman published his sixth book in 2024, titled *Spatial Linear Models for Environmental Data*. Co-authored with Jay Ver Hoef of NOAA's Alaska Fisheries Science Center, this book is aimed at students and professionals with master's-level training in statistics. It presents a unique, thorough, and applied treatment of geostatistics and areal data analysis from the unifying perspective of a spatial linear model. Numerous examples and simulation studies, including R code, are used to illustrate ideas and serve as templates that readers may use to fit their own spatial models to data and draw proper scientific conclusions.

In 2024, Dale also gave invited talks at the University of Connecticut and the Joint Statistical Meetings in Portland, Oregon, and he continued to serve as one of six co-editors of *Annals of Applied Statistics*.



Dale Zimmerman sandwiched between his six books, with the most recent one, *Spatial Linear Models for Environmental Data*, located third from the left.

Faculty and Staff News cont'd.

Joyee Ghosh traveled to Tunisia this past summer for the 8th Annual African International Conference on Statistics. She gave an invited talk titled “Robust Bayesian model averaging” based on joint work with PhD student Shamriddha De. She also presented this work in an invited session at the WNAR/IMS/Graybill 2024 conference in Fort Collins, Colorado.



Joyee Ghosh (far right) in Tunisia



Erning Li

This summer, **Erning Li** received a two-year OpenHawks grant of \$9,000 to support her textbook project, “Introductory Statistics with Hands-on Data Analysis using SAS.”



Boxiang Wang

Boxiang Wang published four papers:

- Tang, Q., Zhang, Y., and Wang, B. (2024). “Finite smoothing algorithm for high-dimensional support vector machines and quantile regression.” *International Conference on Machine Learning (ICML)*, 235, 47865–47884.
- Wang, B., Zhou, L., Yang, J., and Mai, Q. (2024). “Density-convoluted tensor support vector machines.” *Statistics and Its Interface*, 17(2), 231–247.
- Zhou, L., Wang, B., and Zou, H. (2024). “Sparse convoluted rank regression in high dimensions.” *Journal of the American Statistical Association*, 119(546), 1500–1512.
- Wang, T., Yang, J., Li, Y., and Wang, B. (2024). “PIE -- A partially interpretable model with black-box refinement.” *INFORMS Journal on Computing*, to appear.

In 2024, Boxiang gave an invited talk, “CESME: high-dimensional clustering via latent semiparametric mixture models,” at the 7th International Conference on Econometrics and Statistics; and a keynote talk at the 9th International Conference on Statistical Optimization and Learning on “fastkqr: A fast algorithm for kernel quantile regression,” in Beijing, China.

Margie Ebert, academic services coordinator for the Department of Statistics and Actuarial Science, announced that she will retire in January 2025 after nearly 17 years in the department. She has loved working with our undergraduate and graduate students and has been instrumental in guiding their academic careers. She is looking forward to spending time with her family, reading novels, and cheering on the Iowa Hawkeyes, the Oregon Ducks, and her favorite professional sports teams. Margie will be greatly missed and we wish her all the best in her retirement!



Margie Ebert

Faculty Spotlight

Boxiang Wang

Boxiang is an associate professor in the Department of Statistics and Actuarial Science. In July 2024, he also took on the role of director of graduate studies for the department. Boxiang obtained his PhD in the School of Statistics at the University of Minnesota under the supervision of Professor Hui Zou. He earned his master's degree in the Department of Applied Statistics and Operation Research at Bowling Green State University, and his bachelor's degree in the School of Mathematics at Nankai University.

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

I started my journey in math at Nankai University in Tianjin, China, and then came to the U.S. to earn my master's degree in statistics at Bowling Green State University in Ohio. At first, it wasn't easy for me to figure out what I truly wanted, but as I explored statistics more, I realized it was what I had been looking for. From there, I decided to pursue a PhD at the University of Minnesota and then an academic career to follow my passion for research and education. At Iowa, the Department of Statistics and Actuarial Science carries a historical legacy and continues its tradition with a strong faculty and a collegial environment. I feel honored to be on board and to learn from my colleagues. It is the perfect place to continue my journey.

What are your current research interests, and what inspired you to pursue this area of research?

My research interests lie at the intersection of statistics, machine learning, and optimization. With AI revolutionizing the world, like a Fourth Industrial Revolution, it's time for us statisticians to step up and share the leading role in the tide. Inspired by great statisticians like Bradley Efron, Trevor Hastie, Robert Tibshirani, and Jerome Friedman, I believe statistics is becoming more pivotal in the computing age, relying more on computational tools to use data to understand and to transform the world. This belief drives my research to solve machine learning challenges by connecting and extending ideas in statistics, with optimization tools bringing those ideas to life. Most of my research is computing intensive. This is something I've loved since the very beginning. Once I open Sublime Text, I can easily lose



track of time and spend the whole day writing and debugging my code.

What challenges have you faced in your research, and how did you overcome them?

AI is advancing so rapidly that it can be challenging in some sense to choose a research direction and keep up. When I feel overwhelmed and lost, I am always nurtured by the wisdom of our department legend, Bob Hogg. His mantra "Make it fun!" stands as a beacon of hope. It keeps reminding me to focus on what I truly enjoy, and to keep digging into something that can be useful, fundamental, and not fade as the field evolves. Doing research can be tough, but we're tougher when we're having fun.

What are the most significant findings from your recent work, and what are the next steps for your research?

Together with my PhD students, we've made significant advances in pushing computational frontiers, developing new algorithms for support vector machines, high-dimensional statistics, cluster analysis, and more. To name just one example, the fastkqr algorithm for quantile regression, developed by my PhD student, Ms. Qian Tang, is orders of magnitude faster than state-of-the-art solvers. With its hare-like speed, this algorithm has the potential to fuel machine learning applications with statistical insights such

as uncertainty quantification. Looking forward, our next steps involve exploring optimality, interpretability, and transferability for various machine learning models. In the long term, I will continue collaborative endeavors with my colleagues in the Schools of Medicine, Nursing, and Business to apply statistics to make real-world impact.

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

I wish I had a more creative answer, but my PhD advisor, Professor Hui Zou, has had the most influence on my career and research. He often said that supervising students isn't about following some magic instruction book; it's more like an old carpenter guiding apprentices, showing them hand-in-hand how to make a real impact in their work. Since coming to Iowa, I've been fortunate to continue learning from my colleagues. For example, from my day one in Iowa, the former DEO, Professor Joe Lang, encouraged me to diversify my research and not put all my eggs in one basket. My faculty mentor, Professor Kung-Sik Chan, has been a role model consistently teaching me how to grow into a better researcher and educator. I have also learned from the unique experience and research insight of all my colleagues, which have greatly influenced and inspired my research and career.

What do you like most about teaching students?

That's an easy answer: learning together and growing with my students. As an old Chinese saying goes, “十年树木，百年树人” (it takes ten years to grow a tree, but a hundred years to bring up a person). Teaching demands a lot of patience, empathy, and the courage to take a leap in the dark, but it's genuinely rewarding to see my students succeed. The most meaningful moments come when a student knocks on my door to tell me they've learned something from my class. This makes all the efforts worthwhile! My neighbor often shows off a tree that he planted 25 years ago. It always makes me wonder: What will my students be like in 25 years?

What has surprised you in your new role as director of graduate studies (DGS)?

I wouldn't say “surprised,” thanks to the seamless transition made by the former DGS, Professor Aixin Tan. She didn't leave me any surprises to uncover!

Instead, I'd say I have been truly “impressed” by the support I've received at every level in this role. In my Alpha Seminar class, I was deeply appreciative of my students. They provided thoughtful and detailed feedback for improving our graduate programs and curriculum. Working closely with our staff on DGS-related tasks, I've been impressed by their behind-the-scenes skills and efforts to keep our department running smoothly. I've been also impressed by the ongoing support from our alumni, from contributions to our bootcamps to the support for events like the 50th Hogg and Craig Festival. I have been impressed by all these efforts and feel privileged to take on the role of DGS and be part of this incredible team.

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

For our students choosing such an exciting field, I'd say you're on your way to having “the sexiest job of the 21st century” in a flash! My advice is to be open-minded and prepared. With the development of AI, it is crucial to be a fast learner and stay current. Embrace any gaps in knowledge with new techniques and take them as opportunities to learn and grow. To support your journey, our department has been devoted to modernizing the curriculum while keeping our tradition of solid training. We now offer a suite of modern courses in data science, machine learning, and AI, with a strong emphasis on coding skills. New courses like DATA:4610 and DATA:4620 are taught by adjunct professors working in industry and bring real-world insights into classrooms. Take full advantage of these opportunities and push yourself further to prepare as an all-round, full-stack statistician and data scientist.

How do you like to spend your free time?

I enjoy watching soccer and have been a Chelsea fan for over two decades. After moving to Iowa, I started spending my free time watching Iowa wrestling and basketball with my family. GO HAWKS!

Remembering Bob Hogg

November 8, 2024, marked the 100th birthday of **Robert V. Hogg** (1924-2014), who helped establish the UI Department of Statistics in 1965 and was its first chair for 19 years from 1965-83 and 1992-93. Professor Hogg was an internationally renowned statistics textbook author, writing extensively on statistical education and making fundamental research contributions to several areas of statistics, including independence, nonparametric statistics, discriminant analysis, order restricted inference, robust and adaptive statistics, and continuous quality improvement. He was a past president of the American Statistical Association and served as program secretary for the Institute of Mathematical Statistics. He was a Fellow of the ASA and the IMS, as well as an elected member of the International Statistical Institute. He received many honors over the years including the Governor's Science Medal for Teaching, the Mathematical Association of America Award for Distinguished Teaching, the ASA Founders' Award, and the Regents' Award for Faculty Excellence. Bob was larger than life and if you listen carefully, you can still hear his voice booming down the hallway: "Learning statistics is like dancing with a bear: Once you start, you just can't stop!", "Why are we here? To have fun!" and "Thanks for the memories!" Bob always wanted the best for our department and he'd be so proud of how far we've come. Happy 100th Birthday, Professor Hogg!



N.D. Shyamalkumar, Rob Hogg (Bob Hogg's son), Kung-Sik Chan, Joyee Ghosh, and Tammy Siegel celebrate beneath a portrait of Professor Hogg.

New Associates and Fellows

Congratulations to the following Iowa alumni who became Fellows or Associates of the Society of Actuaries, Fellows or Associates of the Casualty Actuarial Society, or Chartered Enterprise Risk Analysts!

SOCIETY OF ACTUARIES - Fellows (FSA)

September 2024 - Emily Grace Lentz (née Hay) (BS 2020)
 September 2024 - Jared David Westphal (BS 2016)
 June 2024 - Suyue Chen (MS 2016)
 June 2024 - Ashton Cracraft (BS 2019)
 December 2023 - Samuel Werner (BS 2019)
 December 2023 - Leslie Menglei Yu (MS 2017)

SOCIETY OF ACTUARIES - Associates (ASA)

August 2024 - Tenghe Li (MS 2016)
 August 2024 - Guy Renquist (BBA, BS 2023)
 August 2024 - Jiacheng Wang (MS 2018)
 July 2024 - Jordan Turner (BS 2021)
 June 2024 - Qingchen (Matt) Meng (MS 2021)
 June 2024 - Tyler Witthoft (BS 2022)
 May 2024 - Daniel Odoom (MS 2021)
 April 2024 - Isaiah Martin (BS 2022)
 April 2024 - Oussa Frederic Oke-Agbo (MS 2020)
 April 2024 - Ian Vasily (2020)
 April 2024 - Jeremy W K Ziemer (MS 2018)
 April 2024 - Maxwell Zoss (BS 2023)
 December 2023 - Yilin Bu (BS 2019)
 December 2023 - Mengwan Wang (MS 2015)

CASUALTY ACTUARIAL SOCIETY- Fellows (FCAS)

2024 - Thomas Ryan Duffy (BS 2013)
 2024 - Woodrow Sabroske (BBA, BA Mathematics 2013)
 2023 - Carter Burns (BS 2019)
 2023 - Joel J. Fitzgerald (BBA, BA Psychology 2010)
 2023 - Jun Hu (MS 2007)
 2023 - Matthew Kulczak (BS 2019)
 2023 - Michael Olczyk (BS 2014)

CASUALTY ACTUARIAL SOCIETY - Associates (ACAS)

2024 - Colin Duffy (BS 2020)
 2024 - Daniel Folchert (BS 2020)
 2024 - Jason McDowell (BS 2018)

CHARTERED ENTERPRISE RISK ANALYSTS (CERA)

September 2024 - Guy Renquist (BBA, BS 2023)
 April 2024 - Kelley Marie Weiss (BS 2010, MBA 2022)
 July 2023 - Collin Abeln (BS 2019)

Career Fair

This year over 40 companies came to our Actuarial Science, Insurance and Risk Management Career Fair held at the Iowa Memorial Union on September 18, 2024. Over 147 students met with company recruiters and set up interviews for internships and full-time positions. 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 2024 Career Fair!

Allianz Life
 American Equity Investment Life Insurance Company
 Athene USA
 Auto-Owners Insurance Company
 BITCO Insurance Companies
 Captive Resources, LLC
 Cottingham & Butler
 Country Financial
 EMC Insurance Companies
 EquiTrust Life Insurance Company
 F&G Annuities & Life
 Farm Bureau Financial Services
 FM
 Global Atlantic Financial Group
 Great Plains Casualty, Inc.
 Great West Casualty Company
 Holmes Murphy & Associates
 IAT Insurance Group
 IMT Insurance
 Kunkel & Associates, Inc.
 Lockton
 Marsh McLennan Agency
 Merchants Bonding Company
 Mutual of Omaha
 National Indemnity Company
 Nationwide
 New York Life Insurance Company
 North Risk Partners
 Northwestern Mutual - Eastern Iowa
 Pacific Life
 Pinnacle Actuarial Resources, Inc.
 Principal Financial Group - Corporate Headquarters
 Ryan Specialty
 Sammons Financial Group
 The Accel Group
 Transamerica
 TrueNorth Companies
 TruStage
 UFG Insurance
 UI, Tippie College of Business - Graduate Programs
 Wellmark Blue Cross Blue Shield

Student News



On November 17, 2024, over 10 teams with 44 students participated in the **2nd Annual Hawkeye Datathon sponsored by Aegon Transamerica**. 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. One of the judges of the Datathon, Dr. Kate Ralston, UI director of data analytics, enrollment management, said: "I wanted to say a huge thank you to you for inviting me to be a part of this year's Datathon. I didn't know what to expect and there is generally a lot of reservation in the admissions world about doing this for a lot of reasons. However, I found this to be a great learning experience to both me and the students. I was so infinitely impressed by the quality of work the students

demonstrated yesterday! I don't mean only the analytical side: their understanding of the coding and the model building part, I mean the overall thoughtful approach they took to the problem at hand, the business need, and the peculiarities of the data available to them. It was wonderful to see how innovative some of the teams were in their approach to maximizing the information available in the dataset, handling the missingness and creating new variables. It was a great experience, and I thoroughly enjoyed being a part of it. Thank you for your partnership and for helping the students become such skillful, mindful, and intentional professionals." Our heartfelt gratitude to all participants, industry experts, and faculty who served as judges and event organizers for making this year's Datathon a resounding success!



Congratulations to graduate students **Behrooz Khalil Loo, Mahdi Saeidi Kousha, Nathan Munshower, David Roth, and Nikita Jaiswal!** Their team, "The Traveling Salesmen," tied for 1st Place out of 22 teams at the 2024 Travelers University Modeling Competition on Kaggle.



The **Actuarial Science Club** leadership has done a great job of scheduling fun, helpful activities for its student members! Recent events include presentations by F&G, Allianz, and The Infinite Actuary; a Transamerica picnic; a talk by alum Marty Klein of Athene sponsored by the UI Foundation; workshops on ACTEX, internships, resumes, and career advice; an Excel competition; a Coaching Actuaries bingo night; a Gamma Iota Sigma collaborative social; ASC Board elections, and much more.

Alumni News

The Ursula Goebel estate has donated over \$3.8 million to two Department of Statistics and Actuarial Science funds: The **Ralph H. and Ursula F. Goebel Endowed Chair in Actuarial Science** will support a chair in Actuarial Science, and the **Goebel Faculty Excellence Fund in Actuarial Science** will provide supplemental financial support for the Goebel Chair and other faculty within Actuarial Science. Ralph Goebel was an alum who received a Master of Science degree from the University of Iowa in 1948 and was a Fellow of the Society of Actuaries and a Member of the Academy of Actuaries. He spent his working years at Northwestern National Life Insurance and retired in 1985. He died peacefully at his home aged 94 in 2017 after a courageous 17-year battle with Parkinson's disease. His wife, Ursula, died peacefully at her home aged 102 in 2024. Both Ralph and Ursula served in World War II, he as a member of the Fighting 69th Infantry Division Association and she as a member of its women's auxiliary. We are so grateful for the generous support from them and our alumni!



The Society of Actuaries (SOA) announces that **David Dillon, FSA, FCA, MAAA (MS 1996)** of Dallas, Texas, will serve as the **2024-2025 SOA President-Elect and Vice-Chair**. Dave will become the 77th president at the 2025 ImpACT Conference, the SOA's annual meeting. He is the sixth University of Iowa graduate to achieve this prestigious position! Dave is senior vice president and principal at Lewis & Ellis, LLC, in Dallas, and an instructor at the Maurice R. Greenberg School of Risk Science – Actuarial Science at Georgia State University. As a consulting actuary, his career has centered around supporting insurance companies, state insurance departments, and other organizations navigating health insurance. Volunteering with the SOA since 2008, Dave served as a member of the SOA Board of Directors, the SOA Professional Development Curriculum and Content Creation Council, the SOA Research Committee, and the SOA Health Section Council along with serving as a media liaison on health topics.

The Casualty Actuarial Society (CAS) reports that **Sara Chen, FCAS, MAAA (BS 2017)** has been appointed consulting actuary at Pinnacle Actuarial Resources, Inc. in Des Moines, Iowa. Sara most recently served as an actuary for a major insurance company. She was the reserving lead for the company's business owners program, including managing substantial IBNR for the line of business. Sara was also responsible for setting the monthly catastrophe reserve estimates for the company's commercial lines division. She is currently the chair of the CAS Microlearning Working Group.



Lawrence (Larry) O'Brien (MS 1996) has been promoted to associate professor within Heriot-Watt University of Malaysia. Heriot-Watt is a fully accredited university with the Institute and Faculty of Actuaries (IFoA – UK version of the Society of Actuaries (SOA)). Actuarial degrees are available from their campuses in Scotland and Malaysia. The Edinburgh campus became the first Center of Actuarial Excellence (CAE) in Europe after Larry's suggestion that they pursue recognition by the SOA. He led their application that resulted in the Malaysian campus being recognized at the Silver Level of the Casualty Actuarial Society (CAS) University Recognition Program. Larry is currently an associate dean, a member of the University Discipline Committee, and recently finished his second appointment on Senate.

Student Graduates

AUGUST 2023 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

PRIMARY PROGRAM, DATA SCIENCE

Alsa Mohamed

BS Data Science, Computer Science Minor

Eldaleona Odole

BS Data Science, BA Mathematics

DECEMBER 2023 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

PRIMARY PROGRAM, ACTUARIAL SCIENCE

Matthew Lickteig

BS Actuarial Science, BS Mathematics

Lucas Regina

***BS Actuarial Science, **BS Data Science, **BS Mathematics, Risk Management and Insurance Certificate*

David Roth

****BS Actuarial Science, ***BA Mathematics*

Jack Temme

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

Joseph Zdarsky

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

PRIMARY PROGRAM, DATA SCIENCE

Josh Nordhaus

BS Data Science

PRIMARY PROGRAM, STATISTICS

Isahia Cheville

BS Statistics (Business, Industry, Government and Research)

Yan Han

BS Statistics (Statistical Computing and Data Science)

Zixiao He

BS Statistics (Business, Industry, Government and Research)

MAY 2024 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES**PRIMARY PROGRAM, ACTUARIAL SCIENCE****Jordan Aaron Anderson**

BS Actuarial Science, BS Mathematics

Tate Billmeyer

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

Thomas Michael Brandt

BS Actuarial Science, Computer Science Minor, Mathematics Minor

Liam Andrew Christensen

BS Actuarial Science, Risk Management and Insurance Certificate

Andrew Michael Dupont

(H) BS Actuarial Science, Business Administration Minor, Mathematics Minor, Risk Management and Insurance Certificate

Alex Ray Ling

BS Actuarial Science, BS Statistics, Mathematics Minor, Risk Management and Insurance Certificate

Nathan Munshower

(H) BS Actuarial Science, Mathematics Minor

Brice Michael Sandahl

BS Actuarial Science, Mathematics Minor

Bryce Serovy

(H) BS Actuarial Science, BA Mathematics, Risk Management and Insurance Certificate

PRIMARY PROGRAM, DATA SCIENCE**Talia Gafrick**

BS Data Science, Spanish Minor

Genevieve Johnson

BS Data Science

Hayden Charles Kimball

BS Data Science

Kelsey Pearl Law

BS Data Science

Zachary William Rowell

BS Data Science, BS Economics

Drake Paul Smith

BS Data Science

Michael James Sullivan

BS Data Science

Student Graduates cont'd.

Max Wayne Swinton

BS Data Science

Carter Jacob Tams

BS Data Science, BS Mathematics

Benjamin Wilson-Langman

BS Data Science, Psychology Minor

PRIMARY PROGRAM, STATISTICS

Ethan Marshall Babicz

BS Statistics, Sports Management Minor

Kassidy Elise Brotherton

BS Statistics, BA Mathematics

Lawrence Lin Deng

BS Statistics, BA Computer Science

Wylan Gao

BS Statistics, BA Political Science

Eman Hagos

BS Statistics

Abigail Leigh McAmis-Burger

BS Statistics

Nicholas William Rider

BS Statistics, BA Cinema

Riley Mae Schumacher

BS Statistics, BA Mathematics

Andi Sun

BS Statistics

Brad Hieu Vu

BS Statistics, BA Mathematics

Abigail Marie Whitehill

BS Statistics, BA Psychology, Computer Science Minor



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

Student Awards and Scholarships

STUDENT AWARDS

Our annual student awards were announced in April 2024.

The **Allen T. Craig Award** for outstanding teaching assistant was presented to Brandon Joly.

Rietz Award for Outstanding Performance on the PhD Comprehensive Exams
Zhenhan Feng

We also presented several **Robert H. Taylor Awards** for academic achievement in actuarial science. Prize money totaling \$6,500 was distributed among this year's recipients:

Taylor-Cosby Award for outstanding performance in ACTS:3080/3085
Amanda Benn and Joshua Nguyen

Taylor-Craig Award for outstanding performance in ACTS:4130
Arden Hallett and Ash White

Taylor-Knowler Award for outstanding performance in ACTS:4280
Uthpala Samarawickrama Arachchige and Bryce Servoy

STUDENT SCHOLARSHIPS

Scholarships totaling \$356,412 were awarded to several students in the 2024-25 academic year. Included among these were several named scholarships:

Athene Scholarship
2024-25: Nathan Munshower, Joshua Nguyen

Norman Gershon Greenberg Memorial Scholarship
2024-25: Conner Curtiss

Lloyd A. Knowler Scholarship
2024-25: Nour Ahmed

Nevermann Scholarship
2024-25: Sydney Steger

Richard D. Pearson Scholarship
2024-25: Jackson Carlborg, Tyler Dill, Samuel Koele, Katherine Maune

Principal Financial Group Scholarship
2024-25: Dane Allen, Kael Christensen, Belle Martin

Transamerica (AEGON) Scholarship
2024-25: Joseph Miyazaki, Margaret Russ

Charles E. and Eleanore G. Wilson Scholarship
2024-25: Annas Ahmed, Dane Allen, Nicholas Bauer, Amanda Benn, Ethan Carnes, Kael Christensen, McKayla Doyle, Kaitlyn Elliott, Gabrielle Fox, Riley Fuhs, Anthony Galusha, Daniel Haack, Arden Hallett, Abigail Jones, Patrick Keating, Karsen Kobl, Isaac Lucas, David Markusic, Belle Martin, Cody McCollom, Joseph Miyazaki, Kyle Montgomery, Robert Mosher, Ethan Osborn, Henry Pollard, Samuel Reckamp, Nate Reed, Christie Rus, Margaret Russ, Abhishek Sen, Travis Stanfield, Cody Stephenson, Luke Stuedemann, Ian Temple, Nolan Temple, Nathan Van Witzenburg, Ryan Venem, Lucas White, Trinity White

Statistics Departmental Scholarship
2024 (Spring): Lawrence Deng, Talia Gafrick, Kelsey Law, Carter Tams

2024 (Fall): Trevor DeButch, Ashwin Dervesh, Camden Foster, Natalie Schwartz



Mark your calendar for March 26, 2025!
<https://1day.uiowa.edu>

Undergraduate Spotlight

Sam Reckamp

Sam will graduate in December 2024 with a BS in statistics and actuarial science with highest distinction, and a minor in mathematics. Having worked as an intern at Transamerica in Cedar Rapids, he will be joining the company full-time once he graduates. Sam has been a tremendous asset to the Actuarial Science Club, and his leadership has allowed the club to flourish. Thank you, Sam!



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

I have always loved math and knew I wanted to do something with math when I grew up. I discovered actuarial science as a sophomore in high school and I haven't looked back since. I decided to come to Iowa because of the fantastic actuarial program and it wasn't too far from my hometown of Huntley, Illinois.

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

One of my favorite parts about serving on the club board and now as president is getting to meet all of the great recruiters that come to the club. I now know people at many different insurance companies throughout the state. I have also loved getting to know more about the Department of Statistics and Actuarial Science as a whole. I have gotten to know more of the great faculty as well as how the department runs.

What is the key to success in this position?

In my opinion, the two biggest keys to success for my position are organization and communication. There are a lot of moving parts inside of the club, so it takes good organizational skills to stay on top of all the emails, events, and responsibilities of the club. It also requires great communication skills because I have to communicate with our club members, outside companies, alumni, and the department. Of course I have help from the other members of the board, but I want to make sure I represent our club professionally.

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

One of the biggest challenges I faced as president was learning how to be in charge of a club. This was my first time being in charge of everyone and not just one task. It took me some time to figure out how to run a board meeting or an event. But I think that I have gained invaluable leadership experience that I will be able to take into my professional career.

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

What excites me most about becoming an actuary is having a plethora of roles to choose from inside of a company. I cannot wait to learn more about each one and figure out which path interests me most, which is why I am super excited to join Transamerica's Student Actuarial Development Rotation Program. In three years, I hope to have my ASA and be close to attaining my FSA. I want to work through my actuarial exams as quickly as possible, so that I can start relaxing and watching sports after work instead of studying.

What is your favorite memory from your time at Iowa?

My favorite memory from my time at Iowa was going to the Iowa vs. Penn State football game my freshman year (2021) and getting to rush the field after we beat Penn State. Growing up watching college sports, I always wanted to rush a field or storm a court, and to finally get to do it was a dream come true. A close second was getting to watch Caitlin Clark throughout her time here at Iowa. But it is hard to choose one moment because there were so many, from getting to watch her break the NCAA points record, to her

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game-winning buzzer beater against Indiana, to the back-to-back Final Fours and National Championships games that we enjoyed.

What is on your bucket list?

My bucket list consists of a lot of sports games to attend and places to travel to. One thing that fits both categories is traveling to Manchester, England to get to watch my favorite soccer team, Manchester City, play a home game at the Etihad Stadium. Along with that, I hope to be able to attend a World Cup game in 2026 when the U.S. hosts it, and attend some Olympic events in 2028 when Los Angeles hosts the Summer Olympics. Lastly, a country that is at the top of my list to travel to is Greece. I would love to see the ruins from the Greek Empire as well as island hop around the hundreds of islands.



PhD and MS Graduates

PhD Graduates

ERIN POST

Erin's PhD in statistics was conferred on May 10, 2024. Her thesis is "Shared Shrinkage Horseshoe Priors for Dirichlet-Tree Multinomial Regression" and her advisor was Aixin Tan.

MAX SAMPSON

Max's PhD in statistics was conferred on August 1, 2024. His thesis is "Topics in Conformal Prediction and Causal Inference" and his advisor was Kung-Sik Chan.

XINGZHI WANG

Xingzhi's PhD in statistics was conferred on December 16, 2023. His thesis is "Variable Screening for High-Dimensional Data via Pearson's Chi-Square Statistics" and his advisor was Kung-Sik Chan.

MS Graduates

MASTER OF SCIENCE GRADUATES IN ACTUARIAL SCIENCE 2023-24:

Edward Addison, Roya Bagheerzadeh, Yang Cao, Anastasia Ellison, Okechukwu Oboh, Uthpala Madubhashini Gunathilake Samarawickrama Arachchige, Yan Shen

MASTER OF SCIENCE GRADUATES IN DATA SCIENCE 2023-24:

Farah Tasnim Ahmed, Olivia Page Frazier, Jocelynn Horanituze, Cade McDonald, Ethan Murra, Brandon Tague, Wenqi Zeng

MASTER OF SCIENCE GRADUATES IN STATISTICS 2023-24:

Payel Ghosal, Alfonzo Martinez, Lyle Paukner, Emilia (Mia) Thedens, Ying Xiang, Yiran Zeng

Graduate Spotlight

Lucas Regina

As a student in the Undergraduate-to-Graduate (U2G) program, Lucas graduated in December 2023 with a BS in actuarial science, a BS in data science, and a BA in mathematics, with a Certificate in Risk Management and Insurance; and he will graduate in December 2024 with an MS in data science. Following graduation, he will join Nationwide Financial as a senior actuarial analyst. Congratulations on all of your accomplishments, Lucas!

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

For the past four and a half years, I have studied actuarial and data science here at the University of Iowa. At the moment, I work as a senior data analyst for a small education startup called STEM Innovator which seeks to modernize the classroom to fit the needs of the 21st-century economy. During the summers of my undergrad, I worked for Milliman IntelliScript, Principal Financial Group, and Oliver Wyman as an actuarial intern in various roles, primarily focusing on combining the technical skills acquired from my data science background and mixing it with the business acumen from my actuarial background to solve a wide variety of problems.

Academically, I have completed undergraduate degrees in actuarial science, data science, and mathematics alongside a Certificate in Risk Management and Insurance. Today, I am nearing completion of my graduate data science degree.

I chose the University of Iowa due to its reputation of excellence in the actuarial field; specifically, the school's ability to prepare actuarial students to pass the preliminary exams at a rapid pace. Additionally, the generous scholarship program through the Department of Statistics and Actuarial Science has made school much more affordable than other options. Finally, the data science program provides a strong foundation in machine learning, deep learning, and artificial intelligence; this is easily one of the most powerful skills to learn in the current economy, given the rise of revolutionary tools like ChatGPT. The insurance and finance industries are rapidly modernizing to use these new technologies, and the role of actuaries is rapidly changing alongside it.

Tell us about your experience as a student in the Undergraduate-to-Graduate (U2G) program in



data science – what are some of the benefits and challenges to being in the U2G program?

I strongly appreciated the flexibility Iowa provided in selecting my courses for the graduate program. I felt like I didn't have the opportunity to take as many machine learning, deep learning, or artificial intelligence courses in my undergraduate program, due to the demanding courseload that came from the triple major. Once I had completed my undergraduate degrees, I had a lot of elective space open for my graduate degree in data science. As a result, I was able to use this open space to take courses to learn more about these new technologies. One of my favorite courses, in particular, was Quantitative Finance and Deep Learning, which directly exposed me to how actuarial and data science can be combined together in finance. Additionally, working as a TA for introductory statistics courses was a very fulfilling experience; it's been fun to help students learn statistics, which has become a very important topic in our world today. The primary challenge of being a member of the U2G program is time management; it's important to plan ahead in many aspects. Taking all these courses while balancing two jobs has been demanding, and it took a lot of discipline to produce the desired results in all these areas.

Knowing that you would already have lucrative actuary job offers after graduating with your bachelor's degrees, what made you decide to continue your studies through the U2G program?

Firstly, it is important to note that I originally came to Iowa intending to major in actuarial and data

science. Back in high school, I saw that the insurance and financial sectors had a lot of potential for modernization, and that companies were interested in moving in that direction. Personally, I want to innovate and solve new issues; I get excited when I see rapidly changing environments and the opportunities that come with them. At the time, it seemed like insurance was an interesting niche to learn about. In hindsight, it turns out pursuing this degree was a worthwhile decision, as the industry has moved sharply in this direction of innovation and modernization.

At IntelliScript, for example, I worked on their Risk Score product research team; Risk Score is an accelerated underwriting product. Essentially, it takes an applicant's prescription and medical data, inputs it into a machine learning model, and tells an insurer exactly how risky the applicant is within minutes. Usually, this underwriting process takes weeks or even months to complete. Insurance companies are constantly finding new ways to automate their processes, and the technical skills learned within a data science degree provide actuaries with an array of tools that can be applied to a wide range of problems.

Therefore, for somebody aspiring to be at the forefront of innovation within the insurance industry, pursuing the MS in data science at Iowa was clearly the best decision for me and my career goals.

Do you have any advice for students interested in the U2G program?

Data science is an incredibly broad field with applications in virtually every industry. To stand out in such a competitive market, it's essential to find your niche — an area you're passionate about — and specialize. By becoming an expert in a specific domain, you position yourself as one of the best candidates for specialized roles.

Personally, my niche will likely be within InsurTech or FinTech, depending on how my career progresses. Yours may or may not be different. Find a niche that excites, motivates, and inspires you to learn continuously and innovate!

You have already passed the first seven actuarial exams toward your Associate of the Society of Actuaries credential. How were you able to achieve this while working on your degrees?

Conquering the actuarial exams was one of the most difficult goals for me to achieve, and the reality

is that lots of sacrifices had to be made for me to do it. For about two and a half years, I was consistently studying for these exams, with virtually no breaks in between each sitting. I aligned my exam sittings with my university courses as much as possible; for example, I took Exam FM the same semester I took Mathematics of Finance, so studying for the exam doubled as studying for the class.

Additionally, remaining disciplined and doing practice problems, regardless of how much energy I had or how I was feeling that day, was key to passing the exams. I can't stress this enough: consistently sticking to your study plan is crucial. I also made a point to remain physically healthy by consistently lifting weights and exercising; it is very easy to neglect these habits during intense study periods, but it's important to remain physically, emotionally, and socially healthy above anything else in life.

If your goal is to pass exams at a fast pace, while also being able to spend time doing all the other things you love, then you have to optimize your study methods as much as possible: an hour of effective studying can yield the same results as a day of inefficient studying. This process involves understanding the psychology and neuroscience behind learning, and using it to your advantage. When I was visiting universities in high school, I visited Drake University and they told me about Roy Ju, the world's youngest Fellow of the Society of Actuaries; he finished all the exams by the age of 20. As it turns out, he wrote a book called *Actuarial Exam Tactics: Learn More, Study Less* which provides his detailed study methods. To this day, I still use the study methods included in the book in my university courses. I also plan on applying these methods to complete the FSA exams. To learn even more, I watched YouTube videos created by students in medical school to understand their study methods and how they retain so much information, which I also found to be very effective.

How has your education at Iowa prepared you to succeed professionally and personally?

As I've already mentioned, the actuarial courses here helped build a strong foundation for the preliminary exam material, which helped me pass them at a fast pace.

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Apart from that, quite a few upper-level courses here at Iowa have emphasized practical application of the material, which helps provide ideas for how to use my education to solve real-world problems. Also, the Risk Management and Insurance Certificate helped me develop more business acumen, which was very valuable in my actuarial internships.

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

I would like to build my personal brand around being an InsurTech actuary: an actuary who specializes in technological innovation within the insurance industry. My goal is to become a visionary in this space, bridging the gap between traditional actuarial science and emerging technology like artificial intelligence, machine learning, and data-driven decision making.

My degrees have equipped me with the analytical and technical skills necessary to excel in this field, and I am incredibly grateful to the University of Iowa for providing such a strong foundation. The coursework, professors, and vast opportunities have all played a critical role in shaping my aspirations.

Recently, I was thrilled to accept an offer to join Nationwide Financial as a senior actuarial analyst. Over the next three years, I hope to develop my technical and leadership skills in Columbus.

What is your favorite memory from your time at Iowa?

Attending my first Hawkeyes football game at Kinnick. Participating in the Wave and feeling the excitement in the stadium are unforgettable memories that I will cherish forever.

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

I mentioned that I've been working at STEM Innovator for the past few years as a data analyst. Dr. Leslie Flynn, the professor I work with and the one who started the company, is definitely the most inspiring individual I've met at Iowa. Personally, I believe that a person's success is measured by the number of people they help and the positive impact they leave on the world, not necessarily by the money or awards they have. With this measurement, she is one of the most successful people I know. STEM Innovator has been transforming classrooms around the country, and has been changing

the way educators prepare students for their careers. Most companies today are searching for professionals who can work with teams, are creative, can innovate, and have entrepreneurial mindsets. Before STEM Innovator, there hadn't been any true attempts to adapt the education system to today's demands, as many critics state that traditional education overemphasizes memorization and standardized testing over fostering the skills that employers value most. With so much emphasis on this style of measurement, students with less resources could also be left behind, despite their potential to excel in creative, innovative, and problem-solving roles that don't fit traditional academic molds. Leslie has found a way to not only inspire the next generation of innovators, but also create opportunities for all students, regardless of their background or resources. I am honored, blessed, and grateful to have worked alongside her and played a role in this transformative mission.

Leslie inspires me to someday build my own projects that can help make the world a better place; she is a fantastic role model for both myself and anybody who seeks to make a genuine impact in the world.

What's on your bucket list?

I *need* to go watch a World Cup game in person; this is probably the number one item on my bucket list. I would also like to travel as much as possible, learn a martial art, and successfully do a handstand.

In Memoriam

Class of 1949

Kermit Pearson
Etowah, NC (BA 1949) died in August 2022

Class of 1951

James Donahey
Austell, GA (BA 1951, MS 1952) died in March 2024

George Mach
Santa Maria, CA (MS 1951) died in March 2024

Class of 1954

James Glasgow
Dallas, TX (MS 1954) died in April 2024

Class of 1959

Michael Kattchee
Coralville, IA (BA 1959, SE 1983) died in April 2024

Class of 1960

William Shinkwin
Milwaukee, WI (MS 1960) died in July 2024

Class of 1961

Leland Wade
San Jose, CA (BA 1961) died in May 2020

Class of 1962

Jerome Vance
Schaumburg, IL (BA 1962, MS 1963) died in July 2019

Class of 2015

Nicholas Schlarmann
Worthington, IA (BS 2015) died in June 2024



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ACTUARIAL SCIENCE**

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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!