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From the Chair

Dear Friends of the Department of Statistics and Actuarial Science,

Greetings to all of you! Last year was another challenging year due to the Covid pandemic. When we first resumed in-person teaching in the fall semester of 2021, we were wary of potential disruptions and possibly moving to online instruction in case of widespread Covid infection. Fortunately, none of that happened and we had a largely uneventful academic year 2021-22.

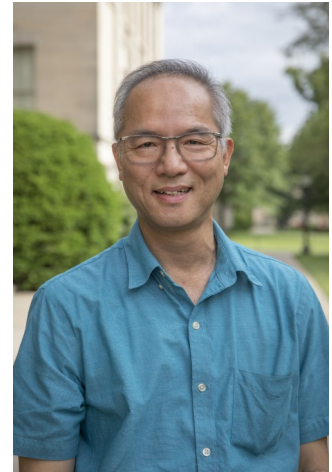
The department generally undergoes a comprehensive review every seven years. Because of the Covid pandemic, our regular departmental review was delayed for one year, to the academic year 2021-22. We completed a self-study in the fall semester of 2021 and met with the review committee in the spring semester of 2022. The review committee report was transmitted to us by the end of the spring semester. It was a thoughtful and constructive report. We have submitted to the College of Liberal Arts and Sciences (CLAS) our collective response to the review committee report. The departmental review process will likely be completed by the fall semester of 2022.

Exciting news about the faculty: Professor Luke Tierney was elected by the American Association for the Advancement of Science as an AAAS fellow “for groundbreaking contributions to theory and methods in support of Bayesian statistics and for foundational and sustained developments in statistical computing.” It is a prestigious fellowship, and we are all very happy for Luke for his well-deserved recognition by the scientific community.

Assistant Professor Zhiwei (Josh) Tong joined the department in November 2021. Josh earned his PhD from the University of New South Wales Business School in summer 2021. His arrival in Iowa City was delayed due to the Covid lockdown in Sydney, Australia. Josh’s research interests include credit portfolio losses, financial networks and systemic risk, and insurance under information asymmetry.

Professor Jian Huang took an early retirement in July 2022, as he and his wife Xinyu moved to Hong Kong to be closer to their parents; Jian is currently the chair professor of data science and analytics at the Polytechnic University of Hong Kong. Jian has been with us for 29 years since August 1994. Jian is a great colleague — his research is inspirational, and he has rendered great service to the department, for instance, his tireless efforts in developing the new Master of Science in Data Science program for the department. We’ll surely miss him and his wife.

Besides Jian, we lost three lecturers: Dr. Michelle Larson and Dr. Blake Whitten to retirement, and Dr. Rhonda DeCook who resigned to take up a new position in the UI College of Public Health. The department is grateful to them for their outstanding teaching and



Kung-Sik Chan

From the Chair cont'd.

dedicated service, over so many past years. We'll miss them and wish them all the best in their new endeavors.

The department has started a new degree program in the fall semester: the Master of Science in Data Science (MSDS). Despite the short time for student recruitment due to the late approval of the program, the MSDS has six students, and we expect to admit more students presently, through the recently approved undergraduate-to-graduate program (U2G) for the MSDS. The U2G program admits undergrads in their senior year to take selected graduate courses that double count toward their undergraduate degree requirements and their MSDS requirements. The U2G is an attractive program as students may earn a BS and an MS in five years.

The Society of Actuaries (SOA) has initiated a new program called the University-Earned Credit (UEC) program. The UEC program enables degree-seeking students who participate in approved courses at certain universities to be eligible for specific SOA exam credit after obtaining the required score (85 percent for US UEC programs). Only Centers of Actuarial Excellence may offer UEC courses. We are one of the 13 universities worldwide granted the UEC status. This will make our actuarial program even more attractive, as our students taking the UEC designated courses may get exemption for up to four SOA exams.

As the SOA incorporates predictive analytics in their exams, we have developed two new courses on predictive analytics. Moreover, our actuarial science students may take advanced data science courses offered in our statistics and data science programs. This facilitates unique student education in the emergent field of predictive analytics which will play an increasingly important role in actuarial practice and research.

The department treasures the strong relationship with our alumni; we greatly appreciate and are warmed by their friendship, generous support, and advice. To better leverage the alumni support in advancing the departmental missions, we are thrilled to announce an Actuarial Science Advisory Board:

Member	Organization	Graduation
David Dillon	Lewis & Ellis	'96 MS
Andy Ferris	Deloitte Consulting	'96 MS
Barbara Hogg	Aon	'82 BA
Martin Klein	Athene	'83 MS
Larry Lickteig	Transamerica	'96 BS
Jennie McGinnis	Farmers New World Life	'06 MS
Dwight Soethout	Principal@	'94 BS

In addition, the Board comprises two departmental members: Kung-Sik Chan (DEO) and Elias Shiu. Tammy Siegel is the administrator for the Board. The Board will meet in the fall to draft its bylaws and set the Advisory Board's priorities. We are grateful to Barb Hogg and Elias Shiu for their leadership instrumental for establishing the Board.

Many of you may have fond memories of the Hogg and Craig Lecture Series, in remembrance of our beloved Professors Robert Hogg and Allen Craig. The Hogg and Craig Lectures in the academic year 2022-23 will be the 50th in the series. It is the longest such lecture series sponsored by a statistics department in the country. We will celebrate with a two-day event (the Hogg and Craig 50th Festival) on April 28-29, 2023. Our distinguished alum Dan Nettleton will deliver the 50th Hogg and Craig Lectures — a public lecture and another more technical talk. Besides the lectures by Dan, the Hogg and Craig 50th Festival will feature several themed mini-talks and panel discussions. There will be ample social time, including a banquet on the evening of April 29. We hope to see you at the Hogg and Craig 50th Festival!

If you plan to travel to Iowa City, please consider dropping by Schaeffer Hall so we can catch up with you.

Sincerely,

Kung-Sik Chan
Robert V. Hogg Professor and Chair

Faculty News

Joyee Ghosh published two papers:

Li, X., **Ghosh, J.**, Villarini, G. (2022). A comparison of Bayesian multivariate versus univariate regression models for prediction, *The American Statistician*, to appear.

Li, X., **Ghosh, J.**, Villarini, G. (2022). Bayesian negative binomial regression model with unobserved covariates for predicting the frequency of North Atlantic tropical storms. *Journal of Applied Statistics*, to appear.

Joyee also gave two invited talks:

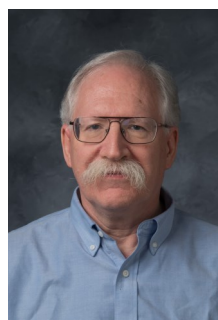
2022 International Indian Statistical Association (IISA) Conference, A comparison of Bayesian multivariate versus univariate regression models for prediction, Bengaluru, India.

The 35th New England Statistics Symposium (NESS 2022), A comparison of Bayesian multivariate versus univariate regression models for prediction, Department of Statistics, University of Connecticut.



Joseph Lang spent the spring semester at Clare Hall College, a college for advanced study, at the University of Cambridge, in the United Kingdom. His research primarily focused on the foundations of statistics, spanning topics such as fiducial and causal inference, conditional probability paradoxes in statistical learning, the impact of missingness, and randomization versus permutation inference.

Johannes Ledolter was honored by the Statistics Division of the American Society for Quality (ASQ) with the 2022 William G. Hunter Award. The award is named in honor of the division's first chair, William G. Hunter. It is given annually to the individual who exemplifies Bill Hunter's enduring qualities of excellence in statistics as a leader, a communicator, a consultant, an educator, an innovator, an integrator of statistics with other disciplines, and an implementer who obtains meaningful results.



Luke Tierney was named an AAAS fellow. He was selected "for groundbreaking contributions to theory and methods in support of Bayesian statistics and for foundational and sustained developments in statistical computing."

Luke also gave an invited lecture:

2022 Ihaka Lecture Series, New plumbing: Adding a pipe operator to base R, University of Auckland, New Zealand.

Dale Zimmerman gave invited talks in 2022 at Kansas State University, Iowa State University, and at the American Statistical Association's Section on Statistics and the Environment meeting in Provo, Utah.



Department News

Master of Science in Data Science Approved by Board of Regents; Joint BS/MS in Data Science Approved by Graduate College

The Iowa Board of Regents approved a request to create a new degree program: Master of Science in Data Science. The Master of Science program in data science requires 30 s.h. of graduate credit. It aims to train the next generation of data scientists with the analytical and technical skills to explore, formulate and solve complex data-driven problems in science, industry, business and government. The program focuses on the theory, methodology, application and ethics for working with and learning from data. Students will acquire the abilities to develop and implement new or special purpose analysis and visualization tools, and a fundamental understanding of how to quantify uncertainty in data-driven decision making. The coursework includes six core courses covering the fundamentals of data science including probability and statistics; data storage, access, and management; and data visualization, exploration, modeling, analysis and uncertainty quantification.



The Graduate College has approved the request from the College of Liberal Arts and Sciences on behalf of the Department of Statistics and Actuarial Science to establish a *NEW* U2G (Undergraduate to Graduate) pairing for UI undergrads (UI UGs) with the Master of Data Science (MSDS). This U2G will allow students from any UI UGs major to apply to the MSDS through the U2G option. The joint Bachelor of Science/Master of Science in Data Science is for eligible students who seek to complete both the BS and the MS at the University of Iowa in five years. Students in the joint program must complete all requirements for each degree. A traditional MS in data science requires completion of 30 s.h. of graduate-level course work. The BS/MS program permits students to count 12 s.h. of credit (four courses) toward the requirements for both degrees. To complete the MS, an additional 18 s.h. of coursework is required. The four courses that count toward both degrees must be taken before or during the fourth year of undergraduate study, after admission to the joint program, and must satisfy degree requirements of both the BS and the MS in data science.

UEC Status Granted by Society of Actuaries for Four Exams

The Society of Actuaries (SOA) has granted the Department of Statistics and Actuarial Science University-Earned Credit (UEC) status for four exams: FM (ACTS:3080), FAM (ACTS:4130 & 4150), ALTAM (ACTS:4280), and SRM (STAT:4560 & 4561). UEC is the first program to be launched in the SOA's new modernized education system, which empowers candidates with choices and alternatives within the actuarial pathway. Only Centers of Actuarial Excellence (CAEs) may offer UEC courses.



In other CAE news, our recent PhD graduate **Hong Beng (Ben) Lim** has started as an assistant professor of finance (actuarial science) at the Chinese University of Hong Kong (CUHK). The actuarial program at CUHK is two decades old and one of only four schools in the Asian region with the CAE designation.

Student News

Max Sampson Receives Teaching Award



Congratulations to our teaching assistant **Max Sampson**, who was the recipient of the 2021 Outstanding Teaching Assistant Award! The University of Iowa Council on Teaching named 29 teaching assistants as recipients of the 2021 award. These awards have been given annually since 1988 to a select group of graduate teaching assistants who have effectively promoted learning and creativity both inside and outside the classroom while demonstrating enthusiasm and dedication to student success. This year's recipients are teaching assistants who taught for at least one semester during the spring, summer, or fall of 2021. Nominations for the awards were sought from undergraduate students, faculty, colleagues, departmental executive officers, and deans. Each awardee receives a certificate as well as a \$1,000 award. "The University of Iowa is fortunate to have many hardworking and innovative teaching assistants," says Bruce Nottingham-Spencer, chair of the Council on Teaching and associate professor of instruction. "Each nomination for the Outstanding Teaching Assistant Award includes letters of support from undergraduate students and those letters tell stories of learning, creativity, and intellectual exploration that are happening in our classrooms every day. Teaching assistants play an important role in the educational mission of the university and it is a pleasure to recognize the very best of them with this award."

Madison Rambo Receives SOA Scholarship

Congratulations to our student **Madison Rambo** for receiving the Curtis E. Huntington Memorial Scholarship from the Society of Actuaries (SOA)! The Curtis E. Huntington, FSA, MAAA, FCA, MSPA (1942-2013) Memorial Scholarship (formerly the John Culver Woody Scholarship) was established to recognize the remarkably positive impact Huntington had on the actuarial profession. He worked tirelessly to help students receive the financial assistance they needed. Given Huntington's 30 years of service to the actuarial profession and to his students, it is only fitting that the scholarship continues in his name. Students must be enrolled as a full-time senior student at a U.S. accredited educational institution, have successfully completed at least one actuarial examination, have a minimum cumulative GPA of 3.0 (on 4.0 scale) and must be nominated by a professor at their school.



Student Graduates

DECEMBER 2021 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

PRIMARY PROGRAM, ACTUARIAL SCIENCE

Nathan Stone

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

PRIMARY PROGRAM, DATA SCIENCE

Robert Gerritsen

BS Data Science

Benjamin Nassif

BS Data Science

Emma Walters

BS Data Science, Art History Minor

Yan Zhao Wu

BS Data Science

PRIMARY PROGRAM, STATISTICS

James Fitzgerald

BS Statistics (Statistical Computing and Data Science), Computer Science Minor, Mathematics Minor, Risk Management and Insurance Certificate

Yimeng Gao

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

Tae Ho Kim

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

James Niebur

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

Zachary Smith

BS Statistics (Statistical Computing and Data Science)

Jefferson Stack

BS Statistics (Business, Industry, Government and Research)

MAY 2022 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

PRIMARY PROGRAM, ACTUARIAL SCIENCE

Carter Copes

BS Actuarial Science, BA Mathematics

Jace Johnson

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

Morgan Joranlien

BS Actuarial Science, BA Mathematics, Business Administration Minor, (UI H) University of Iowa Honors

Bethany Junge

BS Actuarial Science, BS Statistics, BA Mathematics, Business Administration Minor

Taeun Kim

BS Actuarial Science

Isaiah Martin

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

Joseph Vize

****BS Actuarial Science, ***BS Statistics (Mathematical Statistics), Risk Management and Insurance Certificate*

Tyler Witthoft

****BS Actuarial Science, ***BS Statistics (Mathematical Statistics), Mathematics Minor, Philosophy Minor, Risk Management and Insurance Certificate*

PRIMARY PROGRAM, DATA SCIENCE**Daniel DeMaria**

BS Data Science

Brandon Koch

BS Data Science, Sport and Recreation Management Minor

Zhehan Zhang

BS Data Science

PRIMARY PROGRAM, STATISTICS**Sarah Michael Altemeier**

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

Nicholas John Cinnamon

BS Mathematics, BS Statistics (Mathematical Statistics)

Abbey Colleen Fitzsimmons

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

Ziyu Gao

BS Statistics (Statistical Computing and Data Science)

Tingting Jin

BS Statistics (Statistical Computing and Data Science)

Shaoxin Ke

BS Statistics (Statistical Computing and Data Science)

Collin Jay Kepner

BS Statistics (Mathematical Statistics), Business Administration Minor, Mathematics Minor, Risk Management and Insurance Certificate

Student Graduates cont'd.**Colin Maseman**

BA Mathematics, BS Statistics (Mathematical Statistics)

Brennan Charles Merley

BA Mathematics, BS Statistics (Mathematical Statistics)

Levi Paul Patterson

BA Mathematics, BS Statistics (Mathematical Statistics)

Chloe Sorrel Ross

BS Statistics (Business, Industry, Government and Research)

Morgan Rae Tujetsch

BA Mathematics, BS Statistics (Mathematical Statistics)

Chenhao Wang

BS Statistics (Statistical Computing and Data Science)

Peikun Wang

BS Statistics (Statistical Computing and Data Science)

Xizhi Xu

BS Statistics (Statistical Computing and Data Science)

Hang Yu

BS Statistics (Statistical Computing and Data Science)

AUGUST 2022 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES**PRIMARY PROGRAM, STATISTICS****Nhan Ha To**

****BS Statistics (Mathematical Statistics), ***BS Mathematics*

***** With Highest Distinction**

**** With High Distinction**

*** With Distinction**

(H) Honors in the Major

(UI H) University of Iowa Honors

PhD Graduates

HONG BENG (BEN) LIM

Ben's PhD in statistics was conferred on May 13, 2022. His thesis is "Novel Methodologies for Life Settlements Underwriting Evaluation and Mortality Table Development" and his advisor was N.D. Shyamal-kumar. He is now working as an assistant professor at Chinese University of Hong Kong in Hong Kong SAR, China.

CHUNLEI WANG

Chunlei's PhD in statistics was conferred on May 13, 2022. His thesis is "Bayesian Inference for Large and Complex Data" and his advisor was Sanvesh Srivastava. He is now working as a data scientist at Google in Sunnyvale, California.

HONGDA ZHANG

Hongda's PhD in statistics was conferred on May 13, 2022. His thesis is "A Procedure for Multimodal Brain Tumor Segmentation" and his advisor was Luke Tierney. He is now working as a post-doc at Nanjing University in Nanjing, China.

XINGYU ZHOU

Xingyu's PhD in statistics was conferred on May 13, 2022. His thesis is "A Generative Approach to Conditional Distribution Estimation and its Variants and Applications" and his advisor was Jian Huang. He is now working as a senior research statistician at Dow Chemical in Houston, Texas.

MS Graduates

MASTER OF SCIENCE GRADUATES IN STATISTICS 2021-22:

Justin Kelana, Kitae Kim, Tyler Reynolds, Qian Tang

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 2022.

January 2022: Jordan Anderson, Tate Billmeyer, Kassidy Brotherton, Levi Hardiman, Matt Lickteig, Alex Ling, Ryan Venem, Joseph Zdarsky

June 2022: Thomas Brandt, Nathan Munshower, Sam Reckamp, Brice Sandahl



Actuarial Science Club News

Throughout 2022, the UI Actuarial Science Club hosted new and exciting events to increase attendance and overall student interest in actuarial science. Many thanks to our alumni, sponsoring companies, and 2022 club officers for their passion and commitment to helping all of our actuarial science students learn more about this profession!



Thank you to our 2022 Club Officers! Left to right, front row: VP of Alumni Relations - Shuqiong (Sueking) Liang; Underclassman Ambassador - Sam Reckamp; International Ambassador - Yalei Zhao. Left to right, back row: VP of Social Programming - Joseph Zdarsky; VP of Finance - Liam Christensen; VP of Media - Ryan Becker; President - Guy Renquist



Thank you to Transamerica for sponsoring the Actuarial Science Club picnic at City Park on September 6, 2022!



On April 18, 2022, the Actuarial Science Club hosted a cocktail party and etiquette dinner at the Hilton Garden Inn in Iowa City. Our etiquette speaker was finance professor Cathy Zaharis. This was a great opportunity to sharpen our students' soft skills and learn about the nuances of corporate dining. Thank you, Cathy!



Thank you to Principal Financial Group for hosting a day trip to its Des Moines, Iowa, headquarters on April 7, 2022!

Career Fair - September 28, 2022

This year 45 companies came to our Actuarial Science, Insurance & Risk Management Career Fair held at the Iowa Memorial Union. Nearly 150 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 2022 Career Fair!

AAA - The Auto Club Group
 Allianz Life
 American Equity Investment Life Insurance Company
 Aronson Group, Quad Cities
 AssuredPartners
 Athene USA
 Berkshire Hathaway Homestate Companies
 BITCO Insurance Companies
 Blue Cross and Blue Shield Plans in Illinois, Montana, New Mexico, Oklahoma, and Texas
 Captive Resources, LLC
 Cigna
 Cottingham & Butler
 Country Financial
 CUNA Mutual Group
 EMC Insurance Companies
 F&G Annuities & Life
 First MainStreet Insurance L.C.
 FM Global
 Fortitude Re
 Gallagher
 Global Atlantic Financial Group
 Grinnell Mutual Reinsurance Co.
 Holmes Murphy & Associates
 IMT Insurance
 Intrepid Direct Insurance
 Kunkel & Associates, Inc.
 Lockton
 National Indemnity Company
 Nationwide
 North Risk Partners
 Northwestern Mutual - Eastern Iowa
 Officer Selection Team - United States Marine Corps
 Pinnacle Actuarial Resources, Inc.
 Principal Financial Group - Corporate Headquarters
 Sammons Financial Group
 Sentry
 State Farm Insurance Companies
 TigerRisk Partners LLC
 Transamerica
 TrueNorth Companies
 UFG Insurance
 USI Insurance Services
 W. R. Berkley
 Wellmark Blue Cross and Blue Shield
 WTW

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 2022 - Nicholis Odegaard (BS 2019)
 December 2022 - Nathan Promes (BS 2019)
 December 2022 - Morgan Zuidema (BS 2019)
 August 2022 - Xinlyu Gai (MS 2015)
 June 2022 - Michael James Hackbarth (BS 2017)
 June 2022 - Mark Anthony Krines (PhD Applied Mathematics 2014)
 June 2022 - Feng-Yi Leu (MS 2005)
 June 2022 - Alexander Michael Roper (BS 2013, BBA 2014)
 June 2022 - Jacob Schmitt (BS 2018)
 March 2022 - Drew Hoeger (BS 2019)
 March 2022 - Shihao Li (2009)
 March 2022 - Rui Xu (BS 2012)
 March 2022 - Thee Yongvanich (MS 1991)
 December 2021 - Justin Serebro (2017)

SOCIETY OF ACTUARIES

Associates (ASA)

October 2022 - Hannah Bosco (BS 2019)
 October 2022 - Morgan Novak (BS 2020)
 July 2022 - Kean Amiri-Razavian (MS 2020)
 July 2022 - Maxwell Unmacht (BS 2021)
 July 2022 - Ailin Zhang (BS 2018)
 June 2022 - Nicholas Culver (BS 2020)
 June 2022 - Siyang Tao (MS 2016, PhD 2020)
 May 2022 - Emily Fishel (BS 2021)
 May 2022 - Alexander Newberg (BS 2019)
 March 2022 - Hong Beng (Ben) Lim (MS 2018, PhD 2022)
 December 2021 - Ashton Cracraft (BS 2019)
 December 2021 - Ke Li (MS 2018)
 December 2021 - Thaddeus Edward Wasowicz (BS 2009)
 December 2021 - Menglei Yu (MS 2017)

CASUALTY ACTUARIAL SOCIETY

Fellows (FCAS)

2022 - Max Nathaniel Peterson (BS 2018)
 2022 - Dalton Thomas Streff (BS 2016)
 2021 - Zhiwei Wang (MS Biostatistics 2007)

CASUALTY ACTUARIAL SOCIETY

Associates (ACAS)

2022 - Matthew Kulczak (BS 2019)

Hawkeyes in Action



Thank you to Boxiang Wang and his son, Felix, for representing the Department of Statistics and Actuarial Science at the University of Iowa Homecoming Parade on September 28, 2022!



Thank you to our alumnus Marty Klein (MS 1983), executive VP & CFO, Athene, for returning to Iowa for his annual talk with the faculty and students in the Department of Statistics and Actuarial Science on September 29, 2022!

Student Awards & Scholarships

STUDENT AWARDS

Our annual student awards were announced in May 2022.

The **Allen T. Craig Award** for outstanding teaching assistant was presented to Max Sampson.

Lloyd A. Knowler Award for Outstanding Achievement in Actuarial Science

Isaiah Martin and Joseph Vize

We also presented several **Robert H. Taylor Awards** for academic achievement in actuarial science. Prize money totaling \$6,900 was distributed among this year's recipients:

Taylor-Cosby Award for outstanding performance in ACTS:3080

Aidan Chaffin and Dalton Nesheim

Taylor-Craig Award for outstanding performance in ACTS:4130

David Roth and Tianrun Wang

Taylor-Knowler Award for outstanding performance in ACTS:4280

Tyler Witthoft

Rietz Award: Outstanding Performance on the PhD Comprehensive Exams

Erin Post, Max Sampson, Ting-Hung Yu



Erin Post receives her award from Kung-Sik Chan

STUDENT SCHOLARSHIPS

Scholarships totaling \$316,125 were awarded to several students in the 2022-23 academic year. Included among these were several named scholarships:

Athene Scholarship

2022-23: Andrew Dupont

Lloyd A. Knowler Scholarship

2022-23: Maxwell Zoss

Nevermann Scholarship

2022-23: Bryce Serovy

Richard D. Pearson Scholarship

2022-23: Isaac Lucas and Christie Rus

Principal Financial Group Scholarship

2022-23: Lucas Regina and David Roth

Harold W. Schloss Scholarship

2022: Lucas Regina

Transamerica (AEGON) Scholarship

2022-23: Riley Fuhs and Bryce Serovy

Charles E. and Eleanore G. Wilson Scholarship

2022-23: Annas Ahmed, James Allbright, Ryan Becker, Tate Billmeyer, Liam Christensen, Trey Cobb, Andrew Dupont, Riley Fuhs, Alejandro Guzman, Arden Hallett, Peyton Hanley, Levi Hardiman, Aliya Johnson, Brett King, Jack Klemesrud, Isaac Lucas, Trang Luu, Nathan Munshower, Ethan Murra, Dalton Neshelm, Benjamin Plath, Madison Rambo, Samuel Reckamp, Nate Reed, Lucas Regina, Guy Renquist, Jake Roth, Christie Rus, Margaret Russ, Brice Sandahl, Ethan Sauser, Maxwell Shumaker, Jacob Smith, Jack Temme, Megan Tetrick, Ryan Venem, Ethan Verwers, and Hayley Young

Statistics Departmental Scholarship

2022 (Spring): August Muenzenmay

2022 (Fall): Daniel Drake, Cori Ann Grant, Cade McDonald, Ethan Murra

Undergraduate Spotlight

Collin Kepner

Collin graduated in May 2022 with a BS in statistics, minors in mathematics and business administration, and a certificate in risk management and insurance. After an actuarial internship at Principal Financial Group in Des Moines during the summer of 2021, he joined the company full-time as an actuarial assistant in the Actuarial Development Program in July 2022. Collin has been a tremendous asset to the Actuarial Science Club, and his leadership has allowed the club to flourish. Thank you, Collin!

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

I grew up in Ottumwa, Iowa, where I graduated from Ottumwa High School in 2018. My college search process was intensive; I visited 11 colleges across four different states before deciding. In the end, the University of Iowa won out due to its affordability, location, atmosphere, and strong actuarial science program. I'm glad I can look back now and say that I made the right decision!

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

Much of one's success as club president can be attributed to the hard work of all the amazing presidents before them. Each of the presidents before me improved the club and left their mark in a way that made it easier for me to run the club, which gave me the freedom to do more with my role and leave a legacy of my own. Some of my proudest accomplishments throughout my time on the board are reviving the club's mentorship program, updating the club's constitution, and establishing the club's partnership with Coaching Actuaries.

What is the key to success in this position?

Learning when and how to delegate duties was incredibly important to my success. As far as student groups go — especially given the small size of our board — the club does a lot. For all three years that I was on the board, every single board member was smart, capable, and hard-working, and during my term as club president I had an incredible group of people that I could always count on to do a great job.



Collin Kepner (left) in Seville, Spain, at the Casa de Pilatos, a 16th-century Andalusian palace

Delegating duties was difficult in the online environment, since there were generally fewer moving parts overall. However, in the in-person environment, delegation of duties was essential. Whether it was Joseph getting the pizza, Tyler introducing the speaker, Guy handling expenses and reimbursement, Ryan sending out reminders, etc., there was a role for everyone to play. Successful delegation not only allowed me to focus on things unique to my role as president, but it also gave all the board members a chance to contribute directly to the club's success.

What are some of the challenges you faced as club president (for example, related to the pandemic)?

One challenge I faced was managing the transition from an online environment for club events in the spring of 2021 to a mostly in-person environment in the fall of 2021. Because the club had been doing online events for a year, transitioning back to in-person events meant that I had to re-learn a lot of what goes into managing events. Thankfully, I was able to leverage my experience being on the board before the pandemic as well as my experience in other student organizations to restore some normalcy. The other board members were essential to helping me manage this transition, and I am grateful to them for what we were able to accomplish.

Tell us about your study abroad experience (for example, where you went, what you learned, how you were able to make it work with your schedule while studying for the SOA exams, your favorite memories, etc.)?

After a year and a half of the pandemic, I started my senior year knowing I wanted to make the most of my last year of college. I had always wanted to study abroad, but it didn't seem like a feasible option due to the strict, sequential course requirements of my programs of study. I did some research and found that I could study abroad over winter break (and, fortunately, apply my excess scholarship funds to cover most of the cost). Unfortunately, doing a winter term study abroad meant that I had to push my Exam SRM sitting from January to May, but it was completely worth it.

I studied abroad for three weeks in Seville, Spain, where I took a course called "Cuisine and Culture in Spain" through the Council on International Education Exchange (CIEE) with other American college students. The coursework was fast paced but interesting, and the course was sprinkled with excursions to local sights and fun activities like food and wine tastings. Since I only had class for three hours a day during the week, I had a lot of free time to explore the city. I stayed with a host family, which was an amazing experience. My host was an older Spanish man who spoke little English, but we still had a great time getting to know each other via my limited Spanish language knowledge (and a lot of Google Translate). One of my favorite memories from studying abroad was when his children and grandchildren visited for New Year's Eve and we celebrated with lots of gifts, music, and food!

Besides exploring Seville, I visited several other cities in Andalusia (southern Spain), including Granada, Córdoba, and Cádiz, with the friends I made in the program. Each city had its own amazing sights, like Granada's Alhambra, Córdoba's Mosque-Cathedral, and Cádiz's beautiful beaches. I still keep in contact with several of my friends from the trip, and I'm glad that we were able to share the experience together.

What are your dreams? Bucket list items?

I want to visit every continent (even Antarctica). After graduating, I went on a 35-day tour through Europe and visited 11 different countries, where I saw nearly all the major European sights and had

the time of my life. I'd love to take similar trips to other places.

Where do you think you will be working in three years?

I'll still be at Principal, where I'll be in my second rotation in the Actuarial Development Program (and hopefully nearly or completely done with exams!).

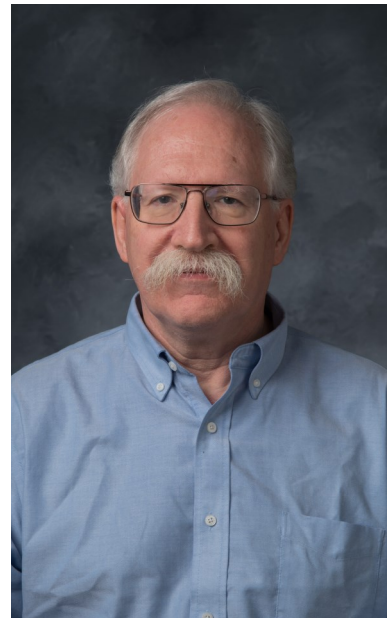
What do you like to do in your spare time?

I love traveling, going to concerts and theatre shows, staying active, and being civically engaged.

Faculty Spotlight

Luke Tierney

Luke Tierney is the Ralph E. Wareham Professor of Mathematical Sciences in the Department of Statistics and Actuarial Science. His research focuses on two aspects of computational methods and tools to support statistical analysis. The first area involves developing computational methods, based on approximations and simulation methods, for carrying out a method of statistical inference called Bayesian data analysis. The second involves designing, developing, and maintaining computing environments for statistics and data science. After working with a computer-programming language called LISP, Tierney joined a team working on developing a programming language called "R," which is widely used in the fields of statistics and data science as well as in many areas of application.



Luke Tierney

Luke, you have a PhD in Operations Research. Can you tell us about how you became a statistician?

My degree is from Cornell University. Statistics there was spread across several departments, including Operations Research. My focus was initially applied probability, but statistics was a big part of my training, and I became more interested in the statistical side towards the end of my time at Cornell and in my time at my first job at Carnegie Mellon University.

What can you tell us about your years before you joined the University of Iowa as the Wareham Professor?

After three years at Carnegie Mellon I moved to the University of Minnesota where I spent 18 years before moving to Iowa. I had not done much computing in my graduate training, but had become very interested in computational methods at Carnegie Mellon and continued to develop those interests at Minnesota. This led to a line of research on mathematical aspects of computational methods to support Bayesian inference, including approximation methods and Markov Chain Monte Carlo methods. It also led to interest in computational infrastructure needed to support statistical research and practice. This led to developing the Xlisp-Stat system and to my involvement with the R project.

You have been actively contributing to open-source statistical computing environments like

Xlisp-stat and R, as well as the Bioconductor project. You have also written a monograph on Lisp-stat. Can you tell us what motivated your development of Xlisp-stat and the role of Xlisp-stat in the open-source statistical computing environments?

My initial motivation for developing Xlisp-Stat in the late 1980s was to create a framework for experimenting with interactive data visualization methods. It proved fairly successful in this respect and was used by a number of researchers to implement new ideas and systems. It remains in limited use today. Releasing Xlisp-Stat as an open source project was very natural to me at the time since it built on so many open source contributions. But the value and importance of open source software was not yet well understood in the academic statistics field, and some felt that it would have been better to commercialize the project. Fortunately the value of open source scientific software is now much better understood and recognized. While my initial motivation for developing Xlisp-Stat was as a framework for data visualization, in the process I became interested in how to design core features of an effective statistical computing environment. I was able to carry over many of the things I had learned to the R project, which I joined in the late 1990s.

R is one of the top software in data science, and you are a key core member of the R team. Why is R so popular in the data science community?

R is an evolution of the S language created by John Chambers and his colleagues at Bell Laboratories to support the work of their statistics group. This group needed to provide statistical support and collaboration in a wide range of areas ranging from quality control in manufacturing to fraud detection. S was designed to be flexible and powerful enough to allow these statisticians to adapt their computations to the needs of their varied problem areas and to help in developing new tools and techniques when needed. R has inherited and built on this pedigree. R also added a robust infrastructure for contributing new methods and code as extension packages. Between the base system and the contributed packages the R ecosystem provides tools for analyzing a wide range of different kinds of data, as well as a framework for building new tools and implementing new methods.

You have written several influential papers, e.g., “Markov chains for exploring posterior distributions [scholar.google.com]” and “Accurate approximations for posterior moments and marginal densities [scholar.google.com]”. Can you tell us how you identify and solve important research problems?

I can't say that I have a particular recipe or strategy. In the approximation work we started with a specific problem of wanting to calculate posterior moments for parameters of a contingency table with missing data. After coming up with a solution, we stepped back and realized that the approach was much more general and could be applied to a wide range of problems. My work on Markov chain methods started from a more theoretical angle. In the early days of Markov Chain Monte Carlo as a framework for practical Bayesian inference many papers used justifications for the approach that were not very sound but at the same time made restrictive assumptions that did not seem necessary. Based on my background in probability I was able to provide a framework that allowed these methods to be justified more rigorously and in many cases with fewer assumptions. Taking this more abstract approach also helped develop some techniques for improving these methods and recognizing that they were quite widely applicable.

You were recently selected as an AAAS Fellow. Congratulations! Can you tell us your view about Statistics and Science?

Thank you! It was a nice surprise, definitely unexpected. In addition to being grateful for the recognition of my own work, I am very pleased that this award recognizes the value of work on software and

computational infrastructure. With the growth of data science it is clear that the academic field of statistics needs to broaden the types of scholarly artifacts considered in hiring and promotion decisions beyond traditional papers to include software and other novel forms of knowledge communication. Learning how to evaluate these nontraditional contributions is challenging; good initial steps have been taken, but much more remains to be done.

You were the chair of the Department of Statistics and Actuarial Science from 2004 to 2014. Can you share with us some of the memorable events during that period?

This was a very busy time with many changes in the department. A major milestone for the actuarial program was the designation of the department as a Center of Actuarial Excellence by the Society of Actuaries. Under the leadership of Russ Lenth and Joe Lang as directors of graduate studies, the statistics graduate program went through a significant revision that has improved our competitiveness in attracting strong graduate students. There were also many changes in the faculty. We were able to hire many excellent new faculty, but also lost a number to retirement, and a few were hired away. My biggest regret is that I was not able to increase the size of the department to a more competitive level. This is becoming more acute in recent years as the demand for teaching and research in statistics and data science has increased.

You are quite skilled at fencing. Can you tell us how you picked up the sport? What are the pros and cons of fencing?

I started when my parents signed me up for lessons when I was around 10. I continued with those lessons for a few years but had stopped by the time I went to college. I started fencing again after grad school, stopped when our kids came along, and started up again in 2008. It is a great sport you can do at all ages. It helps keep me physically fit, but also requires a lot of mental focus, which helps with putting aside other stresses that might be going on, at least for a while.

Hogg and Craig Lecture Series

Save the Date!
for the
Hogg and Craig Lectures - The 50th Festival
April 28-29, 2023

Featuring this year's Hogg and Craig Lecturer:
Dr. Dan Nettleton

Laurence H. Baker Endowed Chair, Distinguished Professor, and Chair, Department of Statistics
Iowa State University
MS and PhD in Statistics, University of Iowa ('93, '96)



Join us!

- ▶ *The Hogg and Craig Lectures Featuring Dr. Dan Nettleton*
- ▶ *Alumni Speakers and Panelists*
- ▶ *Student and Faculty Awards*
- ▶ *The Hogg and Craig Cake*
- ▶ *Banquet Dinner*

Registration is open until February 1, 2023.

Schedule and registration form are available at:

<https://stat.uiowa.edu>



In Memoriam

Class of 1946

Henry Gmeinder
Sun Prairie, WI (BS 1946, MS 1948) died in April 2020

Class of 1948

Earl Eads
Charleston, WV (BA 1948, MS 1950) died in November 2021

Class of 1951

Helen (Scott) Hauser
Springville, PA (BA 1951, MS 1955) died in December 2021

Class of 1952

Philip Marsh
San Diego, CA (BA 1952) died in January 2021

Class of 1955

Satish Bhardwaj
New York, NY (BS 1955, BE 1960, MS 1966) died in April 2015

Class of 1958

John Wilson
Celina, OH (BA 1958) died in March 2022

Class of 1959

Monte Hopper
Millsboro, DE (BS 1959, MS 1961) died in November 2022

Theodore Rosky
Louisville, KY (BA 1959) died in January 2022

Class of 1961

Charles Francis
Knoxville, TN (MS 1961) died in January 2022

Richard Prior
Los Angeles, CA (BS 1961, MS 1963) deceased date unknown

Class of 1962

Roy Johnson
Pullman, WA (MS 1962, PhD 1964) died in July 2022

Michael Stoline
Kalamazoo, MI (BA 1962, MS 1964, PhD 1967) died in September 2022

Class of 1964

Robert Baumgartner
Longmont, CO (BS 1964, MS 1966) died in September 2015

Carol Ulsafer
Missoula, MT (MS 1964) died in July 2021

Class of 1965

Steven Test
Asbury, IA (BA 1965) died in September 2018

Class of 1967

Cristina (Moran) DeHamill
Guaynabo, PR (MS 1967) died in March 2019

Class of 1979

Jong-Her Shen
Holmdel, NJ (BS 1979, MS 1980, MS 1983) died in December 2018

Class of 1981

Leonard Freed
Kailua, HI (MS 1981, PhD 1981) died in October 2021

Class of 1984

Lianng Yuh
Darien, CT (PhD 1984) died in March 2015

Class of 1987

Lori Morgan
Bloomington, IL (BS 1987) died in February 2020



**DEPARTMENT OF
STATISTICS &
ACTUARIAL SCIENCE**

University of Iowa
241 Schaeffer Hall
Iowa City, IA 52242-1409



For more information:

Web: <https://stat.uiowa.edu>
Phone: 319-335-0712

Email:
statistics@uiowa.edu
actuarial-science@uiowa.edu
data-science@uiowa.edu

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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!