SAMPLER

KUNG-SIK CHAN

I take great pleasure in writing to you to share some exciting and noteworthy news from the Department of Statistics and Actuarial Science.

First, some news on departmental leadership changes: Professor **Joseph Lang** completed his term as the DEO, and I began serving a three-year term as the DEO on August 21, 2019. Joe has done an outstanding job in leading the department for the past five years with a personable style, inspiring both students and faculty and greatly enhancing the visibility of the department. In particular, he initiated the new BS program in data science starting in the fall of 2018. This is a joint program with computer science. We are so grateful to Joe for his service.

Some of you may remember two of our faculty, **Ralph and Mary Russo**. Both of them retired at the end of the 2019 academic year after a long, illustrious tenure of 36 years. **Montserrat (Montse) Fuentes** joined the UI as the executive vice president and provost. Provost Fuentes is a statistician and well known for her research in spatial statistics and its applications to atmospheric science. She is a full professor, with tenure, in our department and is the coordinating editor and applications and case studies editor for the *Journal of the American Statistical Association*. Her expertise complements our spatial statistics and statistical computing groups, and we look forward to working closely with her.

The new data science program is progressing well. There are already 23 undergraduate students who have declared this as their major. Some of the students have already taken many required courses and are working toward graduating in two years. The data science program includes a practicum course and a capstone course, with a goal of fostering real data analysis experience in industry, business, and government. Please contact me if you know of any suitable opportunities for these students.

The Society of Actuaries (SOA) began bestowing the Center of Actuarial Excellence (CAE) designation in 2009. Our actuarial science program was among the first group of programs awarded the CAE designation. The designation is for five years, and earlier this year we submitted a renewal application, which included a review of the past five years. Here are some highlights we proudly provided in our application: Since January 2015, 142 former UI students have become associates (116 ASAs and 26 ACASs) and 84 have become fellows (71 FSAs and 13 FCASs). Currently, three alumni serve on the SOA Board of Directors. In 2017, the SOA gave out four Presidential Awards. Three of the four awardees were UI graduates.

I count myself very fortunate to be in a community of inspirational, congenial, and scholarly colleagues, and I am thrilled to share some of their distinctions and achievements with you. Professor **Ambrose Lo** was recently promoted to associate professor with tenure. Ambrose is an outstanding and prolific researcher and has recently published two ACTEX study manuals, one for CAS Exam MAS-I and another on Statistics for Risk Modeling. Professor **Qihe Tang** was elected as an International Statistical Institute (ISI) member in 2018. Professor **Luke Tierney** won the prestigious Statistical Computing and Graphics Award from the American Statistical Society Sections of Statistical Computing and Statistical Graphics for the incalculable impact on applied statistical practice, methodological and computational research, as well as the burgeoning field of big data analytics and data science. Professor **Boxiang Wang** received an Institute of Mathematical Statistics (IMS) new researcher travel award. Many of our faculty receive funding in support of their research, from SOA, state, and federal funding agencies. In particular, Professor **Sanvesh Srivastava** has recently been awarded an NSF grant.

*(Continued from the chair...)* On many occasions, when I tell people I am a statistician, they comment that they find statistics such a difficult subject. I tell them they might have found statistics a fun subject if they had taken some of our classes. We take pride in how we educate our students and inspire them by sharing our enthusiasm for statistics and actuarial science, not just for their usefulness in advancing the sciences, business, humanities, etc., but also for benefiting ourselves in our outlook and society as a whole. The excellence of our faculty's teaching has been acknowledged with college-wide teaching awards given to some of our faculty in the past. This year, **Rhonda DeCook** was recognized with an Honorable Mention for the Collegiate Teaching Award in the 2019 CLAS Faculty Honors Celebration.

Some exciting news about our undergraduate and graduate students: Four PhD students, including two with concentration in actuarial science, graduated in the past academic year. **Wenda Tu**, a current PhD student, won the best poster award at the 2019 Duke Statistics Symposium. Students in our actuarial science program have benefited greatly from talks on a variety of topics about recent industrial trends and practices given by several speakers from Cigna, Nationwide, Athene, and Principal. In the last academic year, students have received generous support from scholarships. These scholarships mean so much to these students by providing encouragement and helping them to realize their full potential. Last but not least, if you happen to be in Iowa City, please consider visiting the department. I would enjoy having the opportunity to meet with you.

ADDITIONAL FACULTY NEWS:

N.D. Shyamalkumar presented joint work with his graduate student, Siyang Tao, at the 11th International Conference on Extreme Value Analysis in Zagreb, Croatia; at the 23rd International Congress on Insurance: Mathematics and Economics, Munich, Germany; and at the 54th Actuarial Research Conference, Indianapolis, Indiana.

N.D. SHYAMALKUMAR

N.D. Shyamalkumar presented joint work with his graduate student, Hong Beng Lim, at the 23rd International Congress on Insurance: Mathematics and Economics, Munich, Germany; and at the 54th Actuarial Research Conference, Indianapolis, Indiana.

N.D. Shyamalkumar presented joint work with his graduate student, Sak Lee, at the 54th Actuarial Research Conference, Indianapolis, Indiana.
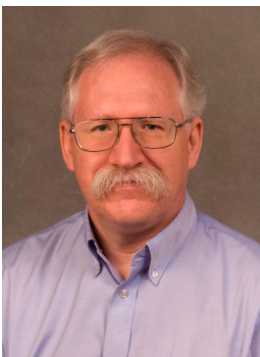
LUKE TIERNEY

Luke Tierney gave a talk titled "The R Bytecode Compiler and VM" in Toulouse, France, in July 2019; he presented the talk "Some Thoughts on Languages for Statistical Computing and Graphics" at the Joint Statistical Meetings in Denver, Colorado, July 2019.

Dale Zimmerman was a keynote speaker at the Second Protected Species Assessment Workshop in La Jolla, California; and at the Central Illinois Chapter of the American Statistical Association Meeting in Peoria, Illinois. The tenth edition of his book, *Probability and Statistical Inference*, co-authored with Robert Hogg and Elliot Tanis, was published this year.

DALE ZIMMERMAN

student NEWS

ACCEPTED TO THE MAJOR:
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 2019.

January 2019: Yizhe Chen, Jason Dedas, Jennifer Del Giudice, Andy Doyle, Austin Enderson-Ohrt, Matthew Fernandez, Chenxi Li, Ian Lundy, Isaiah Martin, Carolina Matuk, Connor Nealon, Danielle Neumann, Bennett Oakley, Luke Torrez, Jordan Turner, and Qiyu Xie.
August 2019: McKenzie Brady, Emma Heiser, Sabrina Holtz, Vaughn Irlbeck, Morgan Joranlien, Johan Kirch, Yihui Liu, John Scorza, Nathaniel Van Kleek, Hengxin Wu, and Zhenxiao Wu.

NEW STUDENT ORGANIZATION FOR GRADUATE STUDENTS IN STATISTICS!
This organization will be known as the Statistics Student Organization (SSO). The purpose of this organization shall be to facilitate connections among graduate students who are majoring in statistics and improve post-graduate outcomes. In addition to social-wise events, SSO will host a series of academic/educational/career development events throughout the school year, including but not limited to a monthly department lunch (inviting speakers with relevant backgrounds), statistics/data science specific career fair, paper reading discussion, etc. Thank you to PhD student **Jun Tang** for starting this newly recognized student organization.

NEW STUDENT ORGANIZATION FOR UNDERGRADUATE STUDENTS IN STATISTICS AND DATA SCIENCE!
This organization will be known as the Statistics and Data Science Organization (SDO). The purpose is to promote social and academic advancement in the field of statistics and data science for undergraduate students at the University of Iowa. SDO will provide as many resources and development events as possible to help the students get involved in school and have a good understanding of the careers that relate to this field. Thank you to sophomore student **Lora Gao** for starting this newly recognized student organization.

MASTER OF SCIENCE GRADUATES IN 2018-19:

MS in Statistics: William "Bill" Chew, Benjamin Jacobs, Alex Richter, Liyang Sun, Yoon Joo Sung-Cho, Chunlei Wang, Chuyi Wang, and Qing Xie.
MS in Actuarial Science: Puishan Lai and Kyumok Lee.

ACTUARIAL FOUNDATION SCHOLARSHIP :
Rachel Rinehart was selected as a recipient of the Curtis E. Huntington Memorial Scholarship from the Actuarial Foundation. This named scholarship is given to 8-10 students from all over the USA. Each university is allowed to nominate only one student and Rachel was chosen as our 2019 nominee. Congratulations, Rachel!
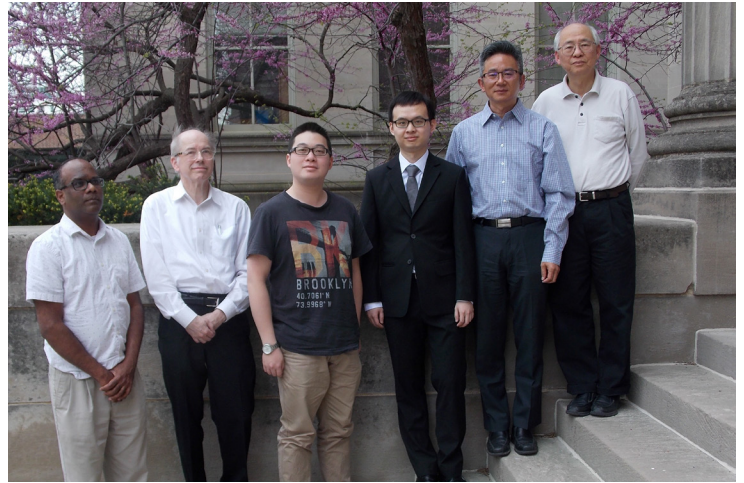
SHENG WANG

Sheng's PhD was conferred in statistics on May 10, 2019. His thesis is "Regularized Skewness Parameter Estimation for Multivariate Skew Normal and Skew t Distributions" and his advisor was Dale Zimmerman.

HAIBO LIU

Haibo's PhD was conferred in statistics on August 2, 2019. His thesis is "Pricing, Bankruptcy, and Liquidation under Insurance and Financial Risks in a Markovian Framework" and his advisors were Ambrose Lo and Qihe Tang.
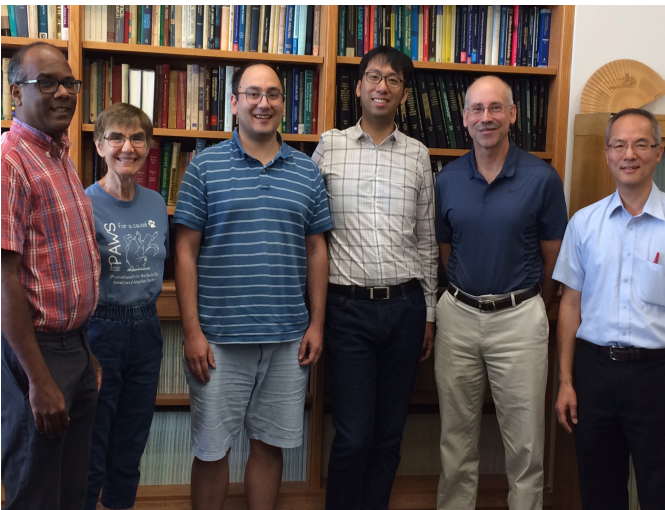
ZHIJIANG LIU

Zhijiang's PhD was conferred in statistics on August 2, 2019. His thesis is "Testing Covariance Structure of Spatial Stream Network Data Using Torgegram Components and Subsampling" and his advisor was Dale Zimmerman.
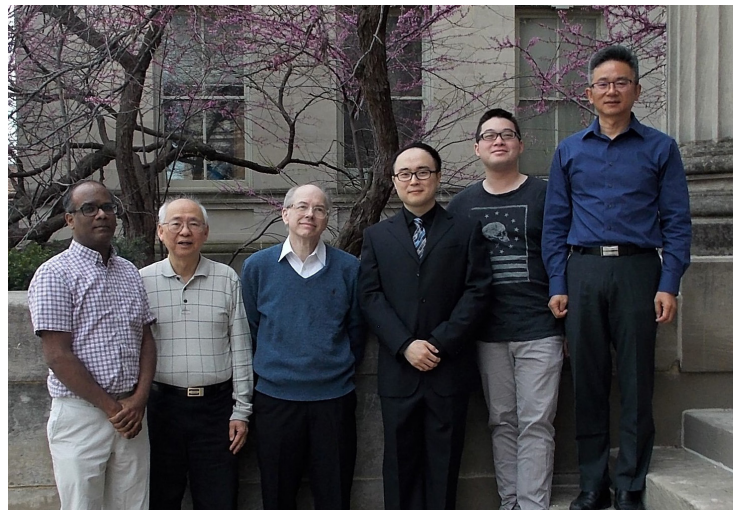
ZHAOFENG TANG

Zhaofeng's PhD was conferred in statistics on August 2, 2019. His thesis is "Quantitative Risk Management under Systematic and Systemic Risks" and his advisors were Ambrose Lo and Qihe Tang.

student GRADUATES

AUGUST 2018 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Sukuhai Giwa
BA Mathematics, BS Statistics

Ziyi Zhang
BS Actuarial Science, Mathematics Minor

DECEMBER 2018 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Hurairah Bin Sallehuddin Abu
BS Actuarial Science

Norshahirah Asmadi
BA Mathematics, BS Statistics

Mohamad Anwar Akmal Bin Mohd Hasli
BS Statistics, Mathematics Minor

Lishangyan Cai
BS Statistics

Muhammad Muaz Foong
BS Actuarial Science, BA Mathematics, BS Statistics

Peiwen Gu
BS Actuarial Science, BA Mathematics

Richard J. Hall-Reppen III
BS Actuarial Science, Risk Management and Insurance Certificate

Shijie Huang
BS Statistics, BA Mathematics

Tae Woo Kim
BS Statistics, Risk Management and Insurance Certificate

Hairuo Liu
BA Mathematics, BS Statistics, Large Data Analysis Certificate

Xing Liu
BS Actuarial Science, BS Statistics

Mitchell Patrick Lorenz
BS Mathematics, Statistics Minor

Mohammad Hafiz Bin Mohammad Tarmizi
*BS Actuarial Science, *BS Statistics, Mathematics Minor

Nadhrah Mohd Hussaini
BS Economics, BS Statistics, Mathematics Minor

Juhyung Park
BS Mathematics, Statistics Minor

Rochelle Leigh Praska
BS Psychology, BS Statistics

Brad Nicholas Skiniotes
BS Statistics

Bryce Joel Switzer
BS Statistics, Risk Management and Insurance Certificate

Jun Wang
BS Mathematics, BS Statistics

Weicheng Xu
BS Mathematics, BS Statistics

Qiuyun Yao
BS Mathematics, BS Statistics

Ailin Zhang
**BS Actuarial Science, BS Statistics, Mathematics Minor

Yan Zhang
BA Mathematics, BS Statistics

Yincheng Zhao
BS Statistics, Mathematics Minor

Mohd Aiman Zulkifly
BS Economics, BS Statistics, Mathematics Minor

MAY 2019 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Collin Davis Abeln
(H)***BS Actuarial Science, ***BS Statistics, (H)***BA Mathematics, Spanish Minor

Carter Joseph Burns
***BS Actuarial Science, ***BS Statistics, ***BA Mathematics

Kevin Andrew Cai
BA Mathematics, BS Statistics, Risk Management and Insurance Certificate

Bradley Shaw Calkins
BS Actuarial Science, BA Mathematics, BS Statistics

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

Heyu Chen
BS Actuarial Science, BA Mathematics, BS Statistics

Xin Chen
BS Psychology, BS Statistics

Anthony Cunningham
*BS Economics, *BS Statistics

Xiaokang Fan
BA Mathematics, BS Statistics

Yimeng Fan
BS Computer Science, BA Mathematics, BS Statistics

Haonan Fei
BS Statistics

Zhiyuan Feng
BS Statistics, Mathematics Minor

Dylan Sean Garland
BA Mathematics, BS Statistics, Risk Management and Insurance Certificate

Sean Jordan Godkin
BS Actuarial Science, BA Computer Science, BA Mathematics

Nicole Karen Gonner
BS Actuarial Science, BA Mathematics, Risk Management and Insurance Certificate

Edward J. Helm
BS Actuarial Science, BA Mathematics, BS Statistics

Drew James Hoeger
**BS Actuarial Science, **BA Mathematics, **BS Statistics, Business Administration Minor

Alyssa Christina Jaglowicz
BS Statistics, Social Science Analytics Certificate

Connor David Kozicki
BA Mathematics, BS Statistics, Risk Management and Insurance Certificate

Matthew J. Kulczak
***BS Statistics, ***BS Economics, ***BA Mathematics, Risk Management and Insurance Certificate

Shiqing Li
BS Statistics, Computer Science Minor, Mathematics Minor

Xiaofei Li
BS Statistics

Chih Yen (Tina) Liu
(H)*BS Actuarial Science, (H)*BA Mathematics, (H)BSE Electrical Engineering, Computer Science Minor

Xinsen Lu
BA Mathematics, BS Statistics

GRADUATES

student GRADUATES

Yujing Lu
(H)***BA Mathematics, (H)***BS Statistics, Computer Science Minor

Jordan A. Nolz
BA Mathematics, BS Statistics

Nicholis Lee Odegaard
*BS Actuarial Science, *BS Statistics, Risk Management and Insurance Certificate

Nathan Lee Promes
BS Actuarial Science, BS Statistics, Mathematics Minor

Scott Bradley Robinson
BS Actuarial Science, BA Mathematics, Risk Management and Insurance Certificate

Amir Wallid Sehic
BA Mathematics, BS Statistics

Ruotian Shi
BA Mathematics, BS Statistics, Large Data Analysis Certificate

Yanchai Song
BA Mathematics, BS Statistics

Zexing Song
BA Mathematics, BS Statistics, Large Data Analysis Certificate

Jeremy Jeffrey Swiatek
BS Statistics, Risk Management and Insurance Certificate

Mitchell Bruce Tamashunas
BS Statistics, Mathematics Minor, Risk Management and Insurance Certificate

Nianjing Tang
BA Mathematics, BS Statistics

Zilin Wang
BA Mathematics, BS Statistics

Samuel M. Werner
(H)***BS Actuarial Science, (H)***BA Mathematics, (H)***BS Statistics, Risk Management and Insurance Certificate

Ling Xiong
BA Mathematics, BS Statistics

Minyuan Xu
BS Actuarial Science, BS Statistics

Yijie Xu
BS Actuarial Science, BA Mathematics

Kelly Yuson
***BA Mathematics, ***BS Statistics, Risk Management and Insurance Certificate, Economics Minor

Kun Zhang
BS Computer Science, BS Statistics

Dongfang Zhao
BS Actuarial Science, BA Mathematics, BS Statistics

Jiongqi Zhao
BA Mathematics, BS Statistics

Xuan Zhao
BA Mathematics, BS Statistics

Morgan Nichole Zuidema
*BS Actuarial Science, *BA Mathematics, Risk Management and Insurance Certificate

* With Distinction
** With High Distinction
*** With Highest Distinction
(H) Honors in the Major

new ASSOCIATES & FELLOWS

In July 2018, the Society of Actuaries substantially revised the Associateship-level curriculum. The number of exams required to be credentialed as an Associate has increased from five to seven. For this reason, there are only three ASAs listed below. **Congratulations to Iowa alumni who became Fellows, CERAs, or Associates of the Society of Actuaries and Associates of the Casualty Actuarial Society!**

SOCIETY OF ACTUARIES
Fellows (FSA)
August 2019 - Shihming Chang (MS 2012)
August 2019 - Will Daniel Claypool (MS 2016)
August 2019 - James Conway (BBA, BS 2013)
August 2019 - Pamela Marie Kirklin (née Walz) (BS 2007)
August 2019 - Julie Maller (BS 2015)
August 2019 - Damon Merhl (BS 2017)
August 2019 - Trent Ivan Stastny-Perez (BS 2017)
June 2019 - Adrian Araguas (MS 2007)
June 2019 - Austin James Swanson (BS 2016)
June 2019 - Weiye Xu (MS 2009)
March 2019 - Yang Jing (BS 2012)
March 2019 - Jong Hyuk Kim (MS 2015)
March 2019 - Cody King (BS 2015)
March 2019 - Ashley Mahe (MS 2014)
March 2019 - Benjamin Mitchell (BS 2015)
March 2019 - Travis Wayne Reichter (BS 2013)
March 2019 - Cong Ren (MS 2014)
March 2019 - Xinxin Ren (MS 2016)
December 2018 - Yijun Liu (MS 2010)
December 2018 - Jie Qiu (MS 2013)

SOCIETY OF ACTUARIES
Chartered Enterprise Risk Analysts (CERA)
September 2019 - Xiaoyi Xiong (MS 2017)
July 2019 - Rebecca Chen (MS 2014)
July 2019 - Michael James Hackbarth (BS 2017)
February 2019 - Will Daniel Claypool (MS 2016)
January 2019 - Jaye Nauman (BBA 2015)
January 2019 - Austin James Swanson (BS 2016)

SOCIETY OF ACTUARIES
Associates (ASA)
September 2019 - Kayla Berkowitz (BS 2017)
September 2019 - Christine Marie Hunt (BS 2017)
September 2019 - Jacob Schmitt (BS 2018)

CASUALTY ACTUARIAL SOCIETY
Associates (ACAS)
2019 - Katherine Marie Adam (BS 2014)
2019 - Sara Chen (BS 2017)
2019 - Kenneth A. Clancy (BS 2016)
2019 - Benjamin Robert Cranny (BS 2012)
2019 - Thomas Ryan Duffy (BS 2013)
2019 - Joel J. Fitzgerald (BBA, BA Psychology 2010)
2019 - Natalie Ann Kleinfelter (BS 1996, MS Math 1999)
2019 - Dalton Thomas Streff (BS 2016)
2019 - Ha-Kion Wong (MS 1998)
2018 - Samuel Young Annan (MS 2011)

*SOA President **JAMES M. GLICKMAN** and alumnus **TRENT STASTNY-PEREZ***

2019 ACTUARIAL SCIENCE CLUB

left to right **COLLIN, RACHEL, MAX, YILIN, EMILY F., JINGYI,** *and* **EMILY H.**

President: Yilin Bu
VP of Finance: Emily Fishel
VP of Social Programming: Rachel Rinehart
VP of Media: Emily Hay
VP of Alumni Relations: Max Unmacht
International Ambassador: Jingyi Yang
Underclassman Ambassador: Collin Kepner

CLUB ACTIVITIES

Throughout 2019, the Iowa Actuarial Science Club has been hosting new and exciting events to increase attendance and overall student interest in actuarial science. During the spring semester, multiple companies came to campus to speak with our students about the actuarial career path and the insurance industry. We were also lucky enough to have a large group of students travel to Cedar Rapids for a company tour and job shadowing opportunities at Transamerica. On top of those networking events with companies, the board organized and executed multiple Excel workshops to improve students' Excel skills, leading up to the annual Iowa Actuarial Science Club Excel Competition in April. To kick off the fall semester, the club hosted many events to prepare students for the career fair, such as a resume workshop, an intern panel, and student-run mock interviews. Additionally, the club hosted alumnus Dave Dillon and traveled to Bloomington, Illinois, for the Midwest Actuarial Student Conference. After having successfully completed the career fair, the club is now planning several social events, a student-run case study, and a few more presentations from guest speakers to wrap up the semester.

Fourth Annual Excel Competition - April 18, 2019

The club hosted Excel workshops to give students a chance to improve their Excel skills, benefiting them in the competition and future careers. Morgan Zuidema educated students about basic Excel functions and shortcuts. Sam Werner shared his expertise on pivot tables, regression, and financial functions. Carter Burns led a tutorial on VBA and 'the power of Excel'. On the day of the competition, 20 students competed across three divisions: no internship experience, internship experience, and graduate students. Students worked through three rounds of questions of increasing difficulty in order to get the most points. The club would like to thank Coaching Actuaries, Athene, Cigna, and Principal for sponsoring this event.

club *SPOTLIGHT*

students at **EXCEL COMPETITION**

Club Membership!

If you're a student (undergraduate or graduate student) who is majoring in actuarial science and/or actuarial science interest, you are automatically a member of the Actuarial Science Club! The department has a mailing list that it uses to send out important information. Members will also receive information from the club officers from time to time via email.

Job Fair - October 2, 2019

This year over 30 companies came to our Actuarial Science, Insurance and Risk Management Job Fair held at the Iowa Memorial Union. Over 160 students attended this fair to learn more about the opportunities these fine companies offer. In the days and weeks ahead, many will have follow-up interviews seeking internship 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.

Companies Attending 2019 Job Fair

Allianz Life

American Equity Investment Life Insurance

American Family Insurance - Madison, WI

Aon

Athene USA

Blue Cross and Blue Shield of IL, MT, OK, NM, and TX

Captive Resources, LLC

Cigna

COUNTRY Financial

De Lage Landen Financial Services

GEICO

Global Atlantic Financial Group

Grinnell Mutual Reinsurance Co.

Holmes Murphy & Associates

IMT Insurance

Nationwide Insurance

Northwestern Mutual

Oliver Wyman

Principal Financial Group

Renewable Energy Group

RSM US LLP

Sammons Financial Group

State Farm Insurance Companies

Transamerica

TrueNorth Companies

United Fire & Casualty

Velocity Risk Underwriters

2018 - 2019

Sanjib Basu
Paul Levy and Virginia F. Tomasek Professor of Biostatistics; Professor, Department of Mathematics Statistics & Computer Science; Director, Center for Biostatistical Development, School of Public Health, University of Illinois at Chicago. "Bayesian criterion based variable selection: Theoretical comparison and applications."

Daniel Bauer
Associate Professor of Risk and Insurance, Hickman-Larson Chair in Actuarial Science, Department of Risk and Insurance, Wisconsin School of Business, University of Wisconsin-Madison. "An integrated approach to measuring asset and liability risks in financial institutions, with George Zanjani."

Christopher Bilder
Professor, Department of Statistics, University of Nebraska-Lincoln. "What if?!"

Kung-Sik Chan
Professor, Department of Statistics and Actuarial Science, University of Iowa. "Reduced-rank spectral classification with high-dimensional time-series data."

Juan Pablo Hourcade
Associate Professor, Department of Computer Science, University of Iowa. "Designing the cognitive future."

Mathew Jacob
Associate Professor, Department of Electrical and Computer Engineering, University of Iowa. "Fast MRI using image structure learning."

Tieming Ji
Assistant Professor, Department of Statistics, University of Missouri. "A Bayesian hidden Markov model for detecting differentially methylated regions."

Joseph Lang
Professor, Department of Statistics and Actuarial Science, University of Iowa. "Slicing and dicing a path through the fiducial forest."

Michael Levine
Associate Professor, Department of Statistics, Purdue University. "Two component semiparametric density mixture with a known component: Estimation and applications."

Colin Lewis-Beck
Visiting Assistant Professor, Department of Statistics and Actuarial Science, University of Iowa. "A hierarchical model for heterogenous reliability field data."

Lizhen Lin
Huisking Foundation, Inc. Assistant Professor, Department of Applied and Computational Mathematics and Statistics, University of Notre Dame. "Hierarchical stochastic block model for community detection in multiplex networks."

Anya Prince
Associate Professor of Law and Member of the University of Iowa Genetics Cluster, College of Law, University of Iowa. "Should life insurers use an applicant's genetic information? Policy lessons from the UK, Australia, and Canada."

Sanvesh Srivastava
Assistant Professor, Department of Statistics and Actuarial Science, University of Iowa. "An asynchronous Distributed Expectation Maximization algorithm for massive data: The DEM algorithm."

Luke Tierney
Professor, Department of Statistics and Actuarial Science, University of Iowa. "ALTREP : Alternate representations of basic R objects."

Kai Wang
Professor, Department of Biostatistics, College of Public Health, University of Iowa. "Effects of a treatment on the likelihood of a mediator and an outcome."

visitors &

STUDENT AWARDS

Our annual student awards were presented on April 25, 2019.

The **Allen T. Craig Award** for outstanding teaching assistant was presented to Seung Wook Kim. Honorable Mentions for outstanding teaching assistant were awarded to Yunju Im, Xun Li, and Siyang Tao.

The **Henry L. Rietz Award** for excellent performance on the PhD Comprehensive Exam was presented to Hong Beng (Ben) Lim, Ruida Song, Chuyi Wang, and Abylay Zhexembay.

Lloyd A. Knowler Award for Outstanding Achievement in Actuarial Science
Collin Abeln, Carter Burns, and Samuel Werner

We also presented several **Robert H. Taylor Awards** for academic achievement in actuarial science. Prize money totaling $15,500 was distributed among this year's recipients:

Robert H. Taylor Award in Actuarial Stochastics
Hong Beng (Ben) Lim, Haibo Liu, Zhaofeng Tang, and Siyang Tao

Taylor-Cosby Award for outstanding performance in ACTS:3080
Nicholas Culver and Mason Newhard

Taylor-Craig Award for outstanding performance in ACTS:4130
Anis Ilyana Hairol Azizi and Daniel Niv

Taylor-Knowler Award for outstanding performance in ACTS:4280
Collin Abeln and Puishan Lai

STUDENT SCHOLARSHIPS

Scholarships totaling $322,250 were awarded to several students in the 2019-20 academic year. Included among these were several named scholarships:

Lloyd A. Knowler Scholarship
2019-20: Natalie Averkamp

Robert A. Patterson Scholarship
2019-20: Jordan Lee Turner

Richard D. Pearson Scholarship
2019-20: Morgan Joranlien and Isaiah Martin

Principal Financial Group Scholarship
2019-20: Emily Fishel and Jordan Lee Turner

Harold W. Schloss Scholarship
2019: Ben Oakley

Transamerica (AEGON) Scholarship
2019-20: McKenzie Brady and Ian Lundy

Charles E. and Eleanore G. Wilson Scholarship
Charles D. Barry, Ryan Becker, Brandon Biedermann, Alec Ciaccio, Nicholas Cinnamon, Trey Cobb, Ashton Cracraft, Nicholas Culver, Austin Enderson-Ohrt, Emily Fishel, Lisa Frishcosy, Alejandro Guzman, Peyton Hanley, Benjamin Janssen, Jace Johnson, Collin Kepner, Brett King, Xavier Loomer, Isaiah Martin, Colin Maseman, Carolina Matuk, Danielle Neumann, Mason Newhard, Morgan Novak, Levi Patterson, Madison Rambo, Rachel Rinehart, Ethan Sauser, Andrew Sherwin, Sricharan Sheshashai, Jacob T. Smith, Megan Svara, Maxwell Unmacht, Nathaniel Van Kleek, Joseph Vize, Tanner Welsh, and Tyler Witthoft
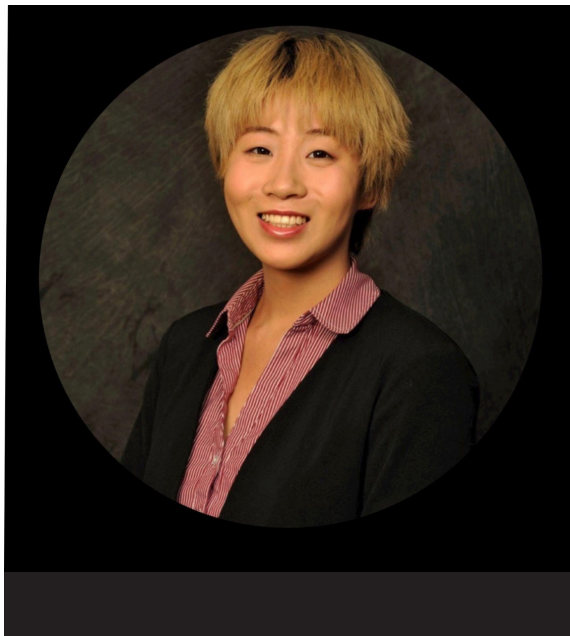
Statistics Departmental Scholarship
2019 (Fall): Melissa Adrian, Baekjun Kim, Ruibo Liu, and Justin Sheldon
2019 (Spring): Melissa Adrian, Matthew Fernandez, Justin Sheldon, and Kelly Yuson

YILIN BU

YILIN BU

YILIN BU, 2019 ACTUARIAL SCIENCE CLUB PRESIDENT

Yilin will graduate in December 2019 with a BS in actuarial science, a BA in mathematics, and a statistics minor. She will be joining Reinsurance Group of America (RGA) in St. Louis, Missouri, as an actuarial analyst once she graduates. Yilin has been a tremendous asset to the club and her leadership has allowed the club to really flourish! Thank you!

Tell us more about you and why you chose to come to the University of Iowa. *I always wanted to study abroad when I was in high school. My uncle who lived in the US recommended the University of Iowa to me because it's well known for its actuarial program.*

As the Actuarial Science Club president, what can you tell us about this position that isn't in the description? *It's definitely a lot of time commitment, but it's very rewarding too. Another thing that isn't in the description is that all the board members are amazing and very helpful!*

What is the key to success in this position? *Always plan ahead and have a good time. Don't try to do everything yourself. It's important for the president to recognize other board members' skills and abilities and coordinate well with each one of them. Talk with Margie and Professor Shiu regularly because they always have good advice.*

What are your dreams? Bucket list items? *I wanted to be a writer when I was young. Right now, the goal is to be an FSA! I also want to travel to different countries. I want to go to Europe, Africa, Australia... I want to go to a lot of places!*

Where do you think you will be working in three years? *RGA, Reinsurance Group of America in St. Louis, for at least three years.*

What do you like to do in your spare time? *When I have spare time, I like to watch movies, work out, and cook. I'm very looking forward to graduating and starting a new chapter of my life, but I'll miss everything here at the University of Iowa!*

SPOTLIGHT

RHONDA DECOOK

R H O N D A   D E C O O K

In the fall of 2018, our department introduced a new data science major that incorporates pieces of both the statistics major and computer science major curricula. The major was created from a cooperative effort between the two departments, as both groups saw a clear benefit for students with such a program. Leading up to the creation of this new major, Dr. Rhonda DeCook was one of the faculty members who was watching the trends in job postings and thinking about how the technical skills of our students fit into this new and growing world of data science. She was also watching how academic departments were evolving to meet the demands from students and from industry in this area. Some departments created certificates or established online curricula, while others geared their programs toward night classes. By choosing to establish a full major, our department sought to produce graduates with a strong mathematical foundation and high data analysis skills, as well as strong programming skills and database knowledge.

Besides observing the trends outside the University of Iowa, Rhonda's work as the faculty mentor for the statistical consulting course alerted her to an increase in demand for data science skills at the local level as well. Rhonda took over the consulting course from Professor Russ Lenth in 2010, and she has been teaching the course each spring since that time. The majority of clients for the course come from within the university, and over the years, students in the course have worked on a few data-science related projects for groups such as the Law School, the Admissions Office, the University College, and the Division of Student Life. Example projects include predicting enrollment of University of Iowa students and predicting retention of first-year UI students. Many of the consulting requests relate to traditional statistical analyses, but if there are students in the course with a data science background, and a relevant project presents itself, Rhonda works to make the project happen. One such project connected two of our students with a law professor who wanted to create a database for decisions on patent-case appeals for the past five years.

Though "data science" is perhaps considered a new field, Rhonda has always been interested in investigating and modeling real data, in computer programming, and in the storytelling power of data visualization. Even in her early days as a high-school math teacher in Madison, Wisconsin, she sought to create and include lessons that would give students hands-on experience in data collection and allow them to connect classroom theory with real life. That spirit has continued into her college-teaching days as she enjoys introducing new statistical tools and methods to students in her classroom.

Robert V. Hogg earned his PhD in mathematics from the University of Iowa in 1950. Later that same year, he joined the Department of Mathematics faculty as one of only two statisticians, the other being Allen T. Craig. In 1965, Hogg helped establish the Department of Statistics and Actuarial Science and became its first chair, serving for 18 years.

Hogg and Craig published the first of several editions of *Introduction to Mathematical Statistics* in 1958, and it remains one of the most popular mathematical statistics textbooks in the world. In addition to "Hogg and Craig," Professor Hogg wrote extensively on statistical education and co-authored many well-received textbooks, including *Probability and Statistical Inference* with Elliot Tanis and Dale Zimmerman, *Loss Distributions* with Stuart Klugman, *Engineering Statistics* with Johannes Ledolter, and *Applied Statistics for Engineers and Physical Scientists* also with Johannes Ledolter.

Among Professor Hogg's many achievements, he became a Fellow of the American Statistical Association (ASA) in 1966 and of the International Statistical Institute (IMS) in 1967. He served as president of the ASA in 1988. He received the Governor's Science Medal for Teaching in 1990, the ASA Founder's Award in 1991, the University of Iowa Collegiate Teaching Award in 1991, the Mathematical Association of America Award for Distinguished Teaching in 1992, and the Regent's Award for Faculty Excellence in 1992.

Professor Hogg was a committed advocate for education and was famously engaging as a teacher, even after he retired in 2001 and until he passed away in 2014 at the age of 90.

Our department is grateful for the generous donations to our Development Fund (30-163-000), which made it possible for us to commission a local artist to paint a picture of Bob. We are proud and delighted to unveil the masterpiece known as the Hogg Portrait. You may already be familiar with his photograph taken in 1971, and we feel it captures Professor Hogg's dynamic personality for communicating, educating, and having fun. "Do good work!" he always said with a smile. The portrait hangs in our Schaeffer Hall conference room. Please drop by anytime to see it in person!

About the artist: Joseph Cowan was born in 1996 in Decorah, Iowa. He studied art and music at Luther College, graduating in 2019. He now lives and works in La Crosse, Wisconsin.

About the frame builder: Matthew Bognar earned his PhD in statistics at the University of Iowa in 2002. He is a hand-tool woodworker and chose walnut and cherry to frame this portrait.

BOB HOGG'S *children:* **ALLEN, MARY, BARB,** *and* **ROB**

robert **HOGG**

hogg and craig LECTURES

Hogg and Craig Lecturer David A. Harville joined us on April 25-26, 2019

David A. Harville served for 10 years as a mathematical statistician in the Applied Mathematics Research Laboratory of the Aerospace Research Laboratories (at Wright-Patterson AFB, Ohio), for 20 years as a full professor in Iowa State University's Department of Statistics (where he now has emeritus status), and for seven years as a research staff member of the Mathematical Sciences Department of IBM's Thomas J. Watson Research Center. He is the author of more than 80 research articles and of three books: *Matrix Algebra From a Statistician's Perspective, Matrix Algebra: Exercises and Solutions,* and *Linear Models and the Relevant Distributions and Matrix Algebra.*

Dr. Harville has served as an associate editor of *Biometrics* and of the *Journal of the American Statistical Association.* He is a Fellow of both the American Statistical Association and the Institute of Mathematical Statistics and is an elected member of the International Statistical Institute. His two lectures were:

"Ranking/Rating Basketball or Football Teams: The NCAA Way and the 'Right' Way."

"Model-Based Prediction in General and in the Special Case of Ordinal Data."

students on **CAMPUS**

Class of 1942
Eleanor Pearson Northrup
Bryn Mawr, PA (BA 1942) died in July 2018

Class of 1947
James W. Spellman
Bloomington, IL (MS 1947) died in March 2019

Class of 1950
Lynn H. Brown
Fort Wayne, IN (BA 1950, MS 1957, PhD 1969) died in December 2018

Class of 1955
William E. Landt
Napa, CA (BA 1955, MS 1959) died in January 2019

Class of 1955
Lowell M. Jones
Vermilion, OH (BA 1955) died in May 2019

Class of 1959
Darrell E. Haugen
Shoreline, WA (MS 1959) died in February 2019

Class of 1983
John C. Christensen
Chapel Hill, NC (MS 1983) died in January 2019

old capitol on **CAMPUS**

THE UNIVERSITY OF IOWA
STATISTICS & ACTUARIAL SCIENCE
SAMPLER

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

HOW YOU CAN HELP...

Many of you have been very generous in the past by supporting our students with your charitable donations. We are very appreciative of your support as it allows us to help many gifted and talented students to achieve their academic goals. Your gift to the Department of Statistics and Actuarial Science benefits education and research!

To contribute, go to the department's online gift website at: http://givetoiowa.org/2020AS99

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

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

You can become a member of the College of Liberal Arts and Sciences Dean's Club with gift support of $1,000 or more during the fiscal year July 1-June 30 to the Department of Statistics and Actuarial Science Development Fund or any other area of the college. Gift support totaling $2,500 or more will qualify you for membership in the Patrons Circle of Dean's Club, designated to recognize the college's most generous benefactors.