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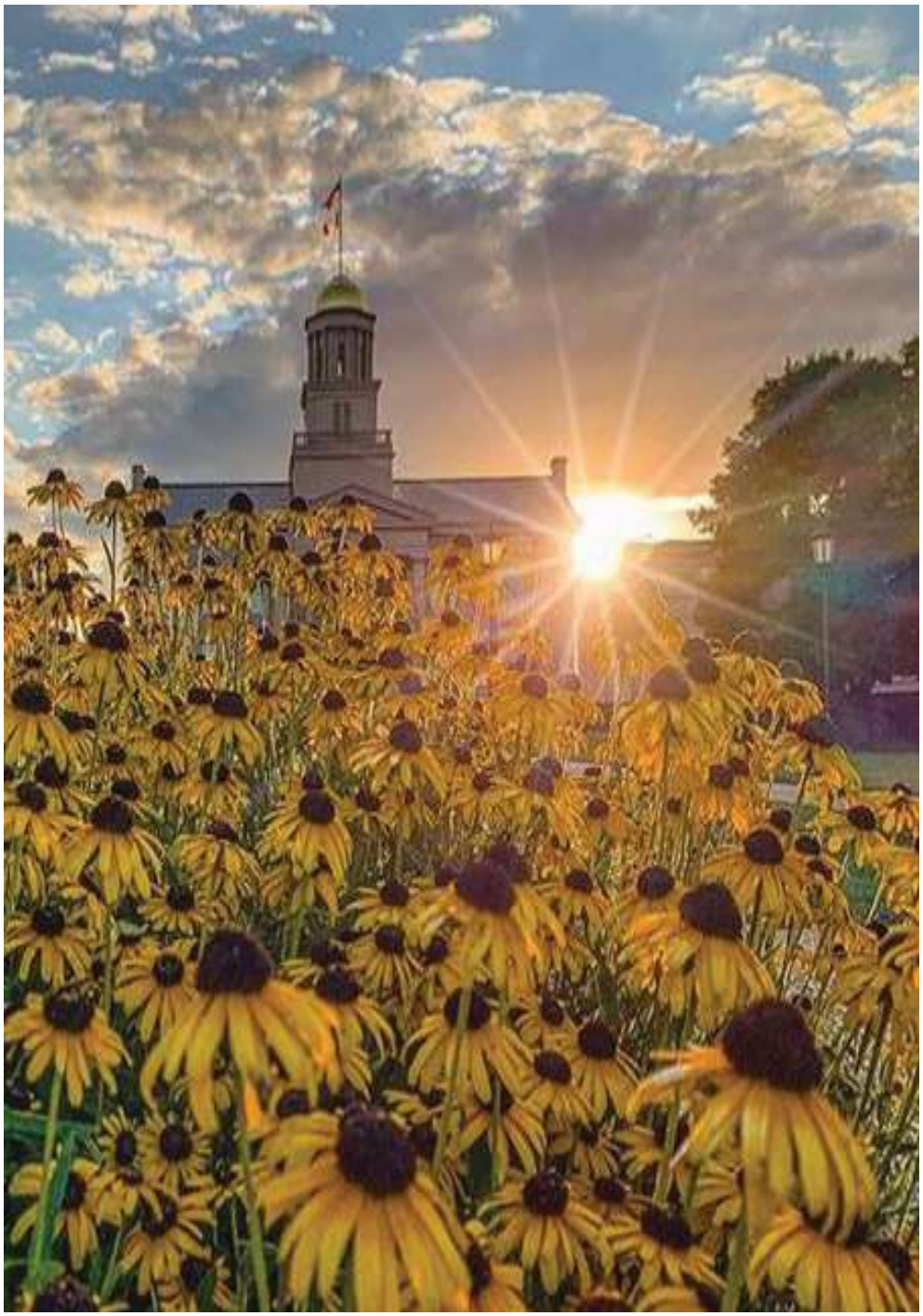
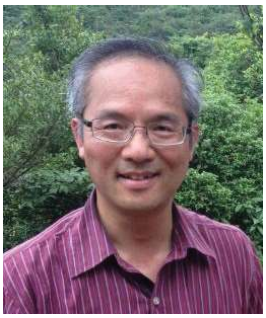
IOWA



from the CHAIR



KUNG-SIK CHAN

Dear Friends of the Department of Statistics and Actuarial Science,

This past year was such an unusual time due to the current COVID-19 pandemic. The University of Iowa went online right after spring break, which was extended by a week. The extended break was pivotal in giving faculty the extra time needed to implement online instruction. Thanks to modern technologies, some student-instructor interactions could still be maintained in an online setting, resulting in a largely successful transition to online learning! However, online instruction no doubt has its own limitations, for instance, difficulty in administering exams and lack of direct personal contact. Moreover, commencement was canceled—a great disappointment for us all. Our faculty, staff, and students stepped up to the challenges, and the graduating senior class in actuarial science even inaugurated the publication of graduation yearbooks. I hope the graduation yearbooks will become a tradition, as they nicely preserve the students' treasured experiences at the UI.

The pandemic is impacting multiple aspects of university operations. For our department, this meant the Society of Actuaries' LTAM exam, which was supposed to be held at IMU in April, was postponed to July. Because the campus was closed, we rented a hall at the Hilton Garden Inn for the exam, which was kindly proctored by Margie Ebert. We are grateful to Margie for her dedication!

Some exciting news: The Society of Actuaries (SOA) announced in January that it awarded Iowa the designation as a Center of Actuarial Excellence (CAE) for another five-year period, until December 31, 2024. We have been a CAE since the inception of the CAE program in 2009. The SOA notification letter highlights that "[t]he site visit team especially appreciated the conference call that was planned with alumni/employers. The insights gained on the call were especially helpful in showing us how the preparation students receive at the university carries them to career success." The CAE designation is very prestigious—the SOA only awards the CAE designation to a total of 33 universities worldwide, 16 of which are major research institutions. The CAE designation has enhanced the visibility of the UI and is an important tool for student recruitment and attraction for potential employers of our graduates.

In May 2020, Professor Ambrose Lo was awarded a Collegiate Teaching Award, which is the top CLAS honor for excellence and impact in teaching. The citation for his award notes the following: "His enthusiasm for teaching is evidenced in the comprehensive course packages he compiles for each of his courses, full of expositions, worked-out examples, practice problems, and solutions. The packages are so popular and effective that he has turned them into formal publications, including his sole-authored textbook, *Derivative Pricing: A Problem-Based Primer* (part of the Chapman & Hall/CRC Financial Mathematics Series), and three popular actuarial exam study manuals used by students worldwide."

Professor Lan Luo joined the department as an assistant professor in the fall. Lan just received her PhD from the University of Michigan. Her research interests include stream processing, change-point detection, sequential testing, and mobile health.

Professor Qihe Tang has resigned from the UI and moved to the UNSW Business School. We are conducting a search in actuarial science. We are grateful for the strong support of CLAS in authorizing the search, despite the fact that the college faces a significant financial shortfall.

faculty

FACULTY & staff news

(Continued from the chair...)

Some of you may remember Professor Emeritus Jonathan D. Cryer. Jon passed away peacefully at his home on December 11, 2019, after a long battle with ampullary cancer. A moving obituary published in the Iowa City Press-Citizen recounted that on the day before his death, Jon still played euphonium in a concert, giving his best in performance. Jon was a passionate teacher, a gifted musician, and a gentleman who will be greatly missed.

While it has been a challenging year, I am proud to note that our students and faculty have accomplished much. Our programs are thriving and the new BS program in data science is taking off with 25 declared primary majors and 12 declared secondary majors as of July 27, 2020. Much of our success is owed to the strong, generous support from our alumni and friends, which is greatly appreciated by all of our faculty, staff, and students. Thank you!

I hope the COVID-19 pandemic will soon be under control. When that happens, and if you are in Iowa City, please consider dropping by Schaeffer Hall so we can catch up with you.

ADDITIONAL FACULTY NEWS:

Luke Tierney gave a joint keynote address at the virtual *useR! 2020* conference on new developments in R. He was also awarded a National Science Foundation grant, joint with Jan Vitek of Northeastern University, for continued development of the R framework for statistical computing.

LUKE TIERNEY

Dale Zimmerman published four papers over the past year:

DALE ZIMMERMAN

Zimmerman, D.L., Tang, J., and Huang, R. (2019). Outline analyses of the called strike zone in Major League Baseball. *Annals of Applied Statistics,* 13, 2416-2451.

Zimmerman, D.L., Zimmerman, N.D., and Zimmerman, J.T. (2020). March Madness "anomalies": are they real, and if so, can they be explained? *The American Statistician*, DOI:10.1080/00031305.2020.1720814.

Karl, A.T. and **Zimmerman, D.L.** (2020). A diagnostic for bias in linear mixed model estimators induced by dependence between the random effects and the corresponding model matrix. *Journal of Statistical Planning and Inference*, DOI: 10.1016/j.jspi.2020.06.004.

Wang, S., **Zimmerman, D.L.**, and Breheny, P. (2020). Sparsity-regularized skewness estimation for the multivariate skew-normal and multivariate skew t distributions. *Journal of Multivariate Analysis,* DOI: 10.1016/j.jmva.2020.104639.

More faculty news on page 10!

PhD GRADUATES

Top: Kung-Sik Chan, Sanvesh Srivastava; Middle: Joe Cavanaugh, Dale Zimmerman; Bottom: Jian Huang, Rui Huang

RUI HUANG

Rui's PhD in statistics was conferred on August 1, 2020. His thesis is "Sparse causal time series analysis" and his advisor was Kung-Sik Chan. Rui is an assistant professor at Nanjing University in Nanjing, China.

YUNJU IM

Yunju's PhD in statistics was conferred on May 15, 2020. Her thesis is "Bayesian Subgroup Analysis in Regression Using Mixture Models" and her advisor was Aixin Tan. Yunju is currently doing a post-doc at Yale University in New Haven, Connecticut.

Top: Luke Tierney, Aixin Tan; Middle: Jian Huang, Brian Smith; Bottom: Joyee Ghosh, Yunju Im

Rui Jin

RUI JIN

Rui's PhD in statistics was conferred on May 15, 2020. His thesis is "Understanding and Improving MCMC Methods for High-dimensional Problems" and his advisor was Aixin Tan. Rui is a research scientist with Eli Lilly and Company in Indianapolis, Indiana.

Top: Kung-Sik Chan, Jin Meng, Ambrose Lo: Bottom: Boxiang Wang, Elias Shiu, Tianbao Yang

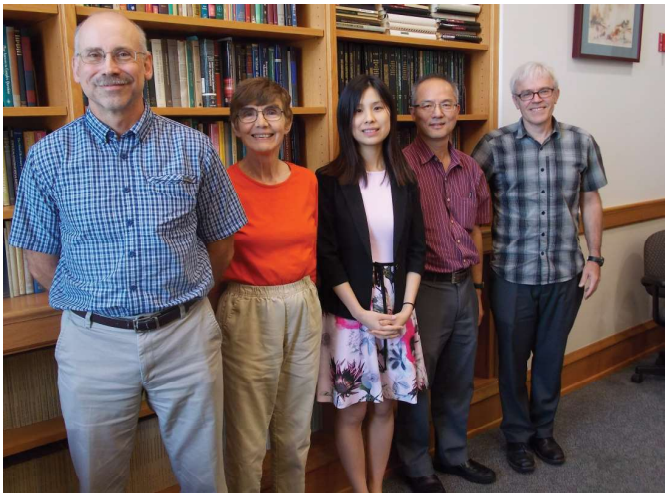
JIN MENG

Jin's PhD in statistics was conferred on August 1, 2020. His thesis is "Topics in high dimensional statistical learning with applications in property-casualty insurance" and his advisor was Kung-Sik Chan. Jin is a data scientist with United Fire Group in Cedar Rapids, Iowa.

Top: Elias Shiu, Sanvesh Srivastava, Thomas Berry-Stoetzle: Bottom: Ralph Russo, Siyang Tao, N.D. Shyamalkumar

SIYANG TAO

Siyang's PhD in statistics was conferred on August 1, 2020. His thesis is "A contribution to modeling tail dependence" and his advisor was N.D. Shyamalkumar. Siyang is now an assistant professor in the Department of Mathematical Sciences at Ball State University in Muncie, Indiana.



L-R: Dale Zimmerman, Kate Cowles, Wenda Tu, Kung-Sik Chan, Joe Lang

WENDA TU

Wenda's PhD in statistics was conferred on December 14, 2019. Her thesis is "Heterogeneity Pursuit in Regression Analysis" and her advisor was Kung-Sik Chan. Wenda is a visiting associate with the FDA in Washington, DC.

L-R: Matt Bognar, Jian Huang, Qiansheng Zhu, Joe Lang, Joseph Cavanaugh, Aixin Tan

QIANSHENG ZHU

Qiansheng's PhD in statistics was conferred on December 14, 2019. His thesis is "On improved confidence intervals for parameters of discrete distribution" and his advisor was Joseph Lang. Qiansheng is now working as a senior analyst in model development with Citi in Wilmington, Delaware.

student GRADUATES

DECEMBER 2019 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Hannah Elizabeth Bosco
BA Mathematics, BS Actuarial Science, Risk Management and Insurance Certificate

Yilin Bu
BA Mathematics, BS Actuarial Science, Statistics Minor

Ashton Clark Cracraft
BS Actuarial Science, Mathematics Minor, Risk Management and Insurance Certificate

Jordan Daniel Gehrke
BA Mathematics, BS Economics, BS Statistics, Sport and Recreation Management Minor

Mingxi Han
BA Mathematics, BS Statistics

Xiaojing Hu
BA Mathematics, BS Economics, BS Statistics, Psychology Minor

Gabrielle Skye Kennedy
BS Actuarial Science, Mathematics Minor

Quynh Le
BS Mathematics, BS Statistics

Alexander Samuel Newberg
BS Actuarial Science, Risk Management and Insurance Certificate

Justin Lee Sheldon
***BS Computer Science, **BS Statistics*

Joshua Michael Sieverding
BS Statistics, BS Computer Science, BS Mathematics

Sanjesvh Syogesan
BA Mathematics, BS Statistics, Risk Management and Insurance Certificate

Yuzhe Yan
BS Statistics

Xuan Zhao
BA Mathematics, BS Statistics

MAY 2020 GRADUATES FROM THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Muhammad Ariff Abdul Malik
BS Actuarial Science, BS Statistics, Mathematics Minor, Risk Management and Insurance Certificate

Melissa Adrian
BS Mathematics, BS Statistics, Large Data Analysis Certificate

Brookelyn Arnold
BA Mathematics, BS Statistics, Sport and Recreation Management Minor, Large Data Analysis Certificate

Natalie Averkamp
BS Mathematics, BS Statistics, Computer Science Minor

Anis Ilyana Hairol Azizi
*(H) **BS Actuarial Science, Mathematics Minor, Statistics Minor, Risk Management and Insurance Certificate*

Collin Brady
BS Statistics, BS Mathematics, Business Administration Minor, Risk Management and Insurance Certificate

Bridget Carroll
BA Mathematics, BS Statistics, BS Biology, Computer Science Minor, Large Data Analysis Certificate

Robert Catalano
BS Statistics, Risk Management and Insurance Certificate

Jiawei Cen
BA Art, BS Statistics

Yizhe Chen
BS Actuarial Science, BS Statistics, Mathematics Minor

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

Abigail Cox
BS Actuarial Science, BA Mathematics, Economics Minor, Risk Management and Insurance Certificate

Nicholas Culver
**BS Actuarial Science, *BA Mathematics*

Nathan Stephen Cunicelli
BA Mathematics, BS Statistics, Philosophy Minor

Jason Michael Dedas
(H) BS Actuarial Science, BS Mathematics, Statistics Minor

Nathan Ross Deege
BS Statistics, BS Mathematics, Risk Management and Insurance Certificate

Tyler Dean Dennis
BS Statistics

Andrew McGuire Doyle
BS Actuarial Science, BA Mathematics, BS Statistics

Colin Duffy
BS Actuarial Science, BS Statistics, Mathematics Minor

Angela Nicole Fiore
BS Actuarial Science, BA Mathematics, Philosophy Minor

Daniel Edward Folchert
(H) BS Actuarial Science, BS Computer Science, BS Statistics, Mathematics Minor

Song Gao
BA Computer Science, BS Statistics

Nicholas Stephen Geati
BS Mathematics, BS Statistics

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

Justin Kelana
BS Actuarial Science, BA Mathematics, BS Statistics

Baekjun Kim
BS Computer Science, BS Statistics

Cody Charles Krause
BS Actuarial Science, BA Mathematics, BS Statistics, Risk Management and Insurance Certificate

Zachary Kuenstler
BS Statistics, Mathematics Minor, Risk Management and Insurance Certificate

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

Dongqing Li
BS Statistics, BA Mathematics, Large Data Analysis Certificate

Xiaowen Li
BS Statistics, BA Mathematics

Xinru Li
BS Mathematics, BS Statistics

Zhirui Li
BS Mathematics, BA Physics, BS Statistics, Computer Science Minor

Ruibo Liu
BA Mathematics, BS Statistics

Yexin Liu
BS Statistics, BS Mathematics, Mathematics Minor

You Lyu
BS Statistics, BS Mathematics, Risk Management and Insurance Certificate

GRADUATES

student GRADUATES

Zexi Mao
BA Mathematics, BS Statistics

Matthew Naples
BS Data Science

Mason Jay Newhard
**BS Actuarial Science, Business Administration Minor, Mathematics Minor, Risk Management and Insurance Certificate*

Hung T. Nguyen
BS Actuarial Science, BS Statistics, Risk Management and Insurance Certificate

Joel Matthew Northrup
BS Statistics, BA Russian

Morgan Brittany Novak
BS Actuarial Science, BS Statistics, Mathematics Minor

Zhenglyu Qian
BA Psychology, BS Statistics

Anthony Michael Rickhoff
BS Statistics, BS Mathematics, Risk Management and Insurance Certificate

Rachel E. Rinehart
BS Actuarial Science, Statistics Minor, Mathematics Minor, Risk Management and Insurance Certificate

Rhedt Roelandt
BS Statistics, Sport and Recreation Management Minor

Adam Schuck
BS Statistics, Sport and Recreation Management Minor

Abolaji Abdul Shiwoku
BS Mathematics, BS Statistics, Business Administration Minor, Risk Management and Insurance Certificate

Rizwan Sidhu
BBA Finance, BS Statistics, Computer Science Minor, Large Data Analysis Certificate

Paul Anthony Sirena
BS Data Science

Cory Skeers
**BS Actuarial Science, *BA Mathematics, Risk Management and Insurance Certificate*

Megan Maria Svara
BS Actuarial Science, BA Mathematics, Business Administration Minor, Statistics Minor

Sanjeev Thangarajah
BS Mathematics, BS Statistics, Business Administration Minor

Allison Ruth Wahrman
BS Statistics, Sport and Recreation Management Minor

Benjamin Michael Willcockson
**BA Economics, BS Statistics*

Lirui Xiao
BS Mathematics, BS Statistics

Yuzhe Yan
BS Statistics

Yilin Ye
BS Actuarial Science, BS Statistics, BS Mathematics

Yuyan Ying
BS Mathematics, BS Statistics

Jiahua Zhang
BS Computer Science, BS Statistics

Yu Zhang
BS Statistics, Writing Certificate

Yuke Zhang
BA Computer Science, BBA Finance, BS Mathematics, BS Statistics

Keyuan Zhao
BS Statistics

Zhiang Zhao
BS Statistics

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

student GRA

new ASSOCIATES & FELLOWS

Congratulations to the following 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)

November 2020 - Yanhao Hu (BS 2014)
November 2020 - Meilin Liu (MS 2014)
November 2020 - Emmie Chizengezenge Munthali (MS 2004)
November 2020 - Tian Sun (MS 2012)
November 2020 - Yisi Wang (BS 2013)
June/August 2020 - Rebecca Chen (MS 2014)
June/August 2020 - Lindsey Marie Farley (née Scott) (BS 2008)
June/August 2020 - Jing Li (MS 2013)
June/August 2020 - Jaye Nauman (BBA 2015)
June/August 2020 - Linh Pham (MS 2017)
June/August 2020 - Dylan Schwers (BS 2015)
June/August 2020 - Xiaoyi Xiong (MS 2017)
June/August 2020 - Xinping Yuan (MS 2017)
March 2020 - Gregory Easton Monson (BS 2014)
March 2020 - Eric Jason Williams (BS 2009)
December 2019 - Patrick K. Arnett (BS 2006)
December 2019 - Jacob Alan Brady (BS 2014)
December 2019 - John Timothy Crowley (BS 2017)
December 2019 - May Ling Hu (MS 2013)
December 2019 - Abby Jo Relph (née Conrad) (BS 2012)
December 2019 - Savana Weller (MS 2016)
December 2019 - Pei Yang (MS 2014)

SOCIETY OF ACTUARIES

Chartered Enterprise Risk Analysts (CERA)

June 2020 - Xinping Yuan (MS 2017)
March 2020 - Jacob Schmitt (BS 2018)
November 2019 - Alex Michael Roper (BS 2013, BBA 2014)

SOCIETY OF ACTUARIES

Associates (ASA)

November 2020 - Richen Xing (BS 2016)
October 2020 - Joseph Robert Peterson (BS 2016)
September 2020 - Drew Hoeger (BS 2019)
September 2020 - Leah Klejch (BS 2018)
September 2020 - Sangjun Park (MS 2017)
September 2020 - Long Pei (MS 2013)
September 2020 - Mitchell Tamashunas (BS 2019)
March 2020 - Suyue Chen (MS 2016)
March 2020 - Hee Seok Nam (MS 2010)

CASUALTY ACTUARIAL SOCIETY

Associates (ACAS)

2020 - Yuxian Ma (BS 2011, MS 2013)
2020 - Michael Olczyk (BS 2014)
2020 - Woodrow Sabroske (BBA, BA Math 2013)
2020 - John Timothy Wieland (BS Math 2011)

Congrats New ASA Drew Hoeger!

Congrats New ASAs!
(L) Long Pei and (R) Mitchell Tamashunas

Congrats New ASA Leah Klejch!

student and faculty NEWS

MASTER OF SCIENCE GRADUATES IN STATISTICS 2019-20:

Brady Anderson, Bradley Dougherty, Alexander Liebrecht, Jiayue Li, Shiao Liu, Xingzhi Wang, Zhen Wang, Fei Wu, Zongyi Xu, Ling Zhang

MASTER OF SCIENCE GRADUATES IN ACTUARIAL SCIENCE 2019-20:

Keean Amire-Razavian, Yomi Kang, Daniel Niv, Oussa Frederic Oke-Agbo, Tao Wang, Han (Hermione) Yu

NEW ACTUARIAL SCIENCE MAJORS:

Due to the demanding nature of the actuarial science major and the difficulty of the professional examinations, the department maintains a selective admission program for actuarial science. Students must apply and be admitted to the major. Congratulations to the following students who were admitted into the undergraduate actuarial science major in 2020.

January 2020: Carter Copes, Jace Johnson, Collin Kepner, Colin Maseman, Nathan Stone, Tyler Witthoft

August 2020: Connor Beath, Meiyu Chen, Nicholas Cinnamon, Bethany Junge, Brett King, Levi Patterson, Madison Rambo, Sricharan Sheshashai, Kim Taeeun, Ethan Verwers, Joseph Vize, Yue Yang, Sujing (Susan) Zhang

(continued from page 3)

Aixin Tan

FACULTY NEWS (CONTINUED):

Aixin Tan gave a talk, "On the theory and practice of Bayesian computing," at ACT Tech Talks, ACT, in Iowa City, Iowa, in May 2020. She has also published a paper:

Jin, R. and **Tan, A.** (2020+). Fast Markov chain Monte Carlo for high dimensional Bayesian regression models with shrinkage priors. Journal of Computational and Graphical Statistics.

Ambrose Lo

Ambrose Lo received a 2019-2020 Collegiate Teaching Award from the College of Liberal Arts and Sciences, University of Iowa, in recognition of his exemplary performance as a teacher and his numerous contributions to our department's actuarial science program, both inside and outside the classroom. His enthusiasm for teaching is evidenced by the comprehensive course packages he has compiled for each of his courses, full of expositions, worked-out examples, practice problems, and solutions. These packages are so popular and effective that he has turned them into formal publications, including his sole-authored textbook, *Derivative Pricing: A Problem-Based Primer* (part of the Chapman & Hall/CRC Financial Mathematics Series), and three ACTEX study manuals (for Exams MAS-I, PA, and SRM) used by students worldwide. Ambrose has also published two papers:

Lo, A., Tang, Q., Tang, Z. Universally marketable insurance under multivariate mixtures. *ASTIN Bulletin: The Journal of the International Actuarial Association*, forthcoming.

Lo, A. (2020). Invited discussion of "optimal reinsurance designs based on risk measures: a review" by Jun Cai and Yichun Chi. *Statistical Theory and Related Fields*, 4 (1), 23-25.

student AWARDS & SCHOLARSHIPS

FACULTY NEWS (CONTINUED):

2020 STUDENT CAMPAIGN TO HELP PAY FOR SOA/CAS EXAM FEES

Michelle A. Larson rejoined our department five years ago. She is a graduate of our department (B.S. 1989 in Actuarial Science; M.S. 1994 and PhD 2002 in Statistics), past actuarial science coordinator and instructor (1995-2000), and current lecturer. This past fall, she initiated a campaign and raised funds to be used to reimburse exam fees to students who pass professional exams. The campaign reached its initial goal of $15,000 in just three weeks and continues to raise funds for an endowment. Thanks to all our alumni and friends for their support.

"I think reimbursing fees is an important part of our tradition and helps us to attract strong students. I still remember this from when I was an undergraduate; organizing this campaign has been a way for me to pay it forward to the department, to future students, and to the actuarial profession," said Michelle. "I truly appreciate the support I've received since initiating this campaign. The Actuarial Science Club and students have run with the idea and managed most of the heavy lifting for the website, different tasks, contacts, etc. These experiences are definitely an added benefit for the students; they are learning skills that will help them in their future employment and becoming involved members of the actuarial profession."

STUDENT AWARDS

Our annual student awards were announced in May 2020. Due to the pandemic, the official recognition event was canceled.

The **Allen T. Craig Award** for outstanding teaching assistant was presented to Siyang Tao.

Lloyd A. Knowler Award for Outstanding Achievement in Actuarial Science
Nicholas Culver and Anis Ilyana Hairol Azizi

Black-Scholes Award for outstanding performance in ACTS:4380
Emily Fishel

We also presented several **Robert H. Taylor Awards** for academic achievement in actuarial science. Prize money totaling $5,800 was distributed among this year's recipients:

Robert H. Taylor Award in Actuarial Stochastics
Jin Meng

Taylor-Cosby Award for outstanding performance in ACTS:3080
Jordan Turner and Jiantong (Brook) Li

Taylor-Craig Award for outstanding performance in ACTS:4130
Jordan Turner and Ian Vasily

Taylor-Knowler Award for outstanding performance in ACTS:4280
Anis Ilyana Hairol Azizi and Frederic Oke-Agbo

STUDENT SCHOLARSHIPS

Scholarships totaling $308,190 were awarded to several students in the 2020-21 academic year. Included among these were several named scholarships:

Lloyd A. Knowler Scholarship
2020-21: Matthew Fernandez

Robert A. Patterson Scholarship
2020-21: Jordan Lee Turner

Richard D. Pearson Scholarship
2020-21: Trey Cobb, Peyton Hanley, Madison Rambo

Principal Financial Group Scholarship

2020-21: Madison Rambo

Harold W. Schloss Scholarship

2020: Lisa Frichcosy

Transamerica (AEGON) Scholarship

2020-21: Sricharan Sheshashai, Nathan Stone

Charles E. and Eleanore G. Wilson Scholarship

Charles D. Barry, Ryan Becker, Colton Benjamin, Liam Christensen, Trey Cobb, Carter Copes, Rafael De La Paz, Austin Enderson-Ohrt, Emily Fishel, Lisa Frishcosy, Alejandro Guzman, Jace Johnson, Bethany Junge, Collin Kepner, Brett King, Xavier Loomer, Isaiah Martin, Colin Maseman, Ethan Murra, Danielle Neumann, Ellie Odele, Levi Patterson, Guy Renquist, Ethan Sauser, Bryce Seovy, Andrew Sherwin, Sricharan Sheshashai, Jacob T. Smith, Maxwell Unmacht, Nathaniel Van Kleek, Ethan Verwers, Joseph Vize, Tanner Welsh, and Tyler Witthoft

Statistics Departmental Scholarship

2020 (Fall): Carolina Matuk, Xiaoying Pan, Andrew Pottebaum, Xiaofeng Yang

2020 (Spring): Xiaowen Li, Ruibo Liu, Carolina Matuk, Sanjeev Thangarajah

EMILY FISHEL

EMILY FISHEL

Emily will graduate in May 2021 with a BS in actuarial science, a BS in statistics, a minor in mathematics, and a certificate in risk management and insurance. Having worked as an intern at Principal Financial Group in Des Moines, Iowa, for the past two summers, she will be joining the company full-time as an actuarial assistant within PFG's Actuarial Leadership Development Program once she graduates. Emily has been a tremendous asset to the club, and her leadership has allowed the club to flourish even under the constraints imposed by the Covid-19 pandemic. Thank you, Emily!

Tell us more about you and why you chose to come to the University of Iowa.
I am a senior from Cedar Falls, Iowa. I chose the UI because I loved the fact that it was a Big Ten school, which meant football games and endless extracurricular opportunities. After meeting with Margie Ebert (the academic coordinator for actuarial science) during my senior year of high school, I felt that the actuarial science program here would challenge and excite me.

What do you like to do in your spare time?
I enjoy playing tennis, hanging out with friends at Big Grove Brewery, and watching The Bachelor or true crime shows.

As the Actuarial Science Club president, what can you tell us about this position that isn't in the description?
It is very meaningful and rewarding! I have met so many incredible people through the club and gained from a multitude of opportunities. Additionally, I've learned that everything comes full circle. As a freshman, I received advice and encouragement from previous club leaders. Now as a senior, I enjoy sharing what I've learned with underclassmen.

What is the key to success in this position?
Strong attention to detail and communication are must-haves. Another key to success is relying on the team to create better outcomes than we could create individually. The board members, Collin, Max, Carter, Tyler, Hengxin, and Guy, have all made significant contributions to the club.

What are some of the challenges you've faced as club president related to the pandemic?
At first, the biggest challenge was constantly adjusting to new guidelines, changing plans, and uncertainty. Now, the challenge facing the board is maximizing student involvement in a virtual environment. One of the biggest perks about the club is the social interaction with your peers. We're doing our best to build these connections through a mentorship program, volunteering opportunities, and virtual social events.

What are your thoughts on how the pandemic has impacted actuarial science students in terms of their studies, job searches, etc.?
It seems that some students love the flexibility of learning remotely, while others dislike the monotony of studying, working, and listening to lectures from home. Regardless, I'd say that actuarial students are generally well equipped for more independent studying due to the professional exams. I think the job and internship field is a bit more competitive due to the pandemic. However, from what I've seen, students who are inherently driven and self-motivated have found ways to adapt. For example, in the absence of in-person company visit days, students are meeting more with previous interns to get a feel for a company.

What are your dreams? Bucket list items?
I have never traveled outside of the country, so my older sister and I planned on taking a trip overseas together after I graduate. Due to the pandemic, this is less of a guarantee. I'd love to see Greece, Spain, Chile, and Costa Rica eventually, though!

Where do you think you will be working in three years?
I will be at Principal Financial Group! PFG has a rotation program for their actuarial students, so I'm looking forward to experiencing the variety of departments, roles, and teams. I think it'd be fun to eventually help with recruiting efforts, too.

faculty **SPOTLIGHT**

LAN LUO

LAN LUO

Our new assistant professor in the Department of Statistics and Actuarial Science at the University of Iowa is Dr. Lan Luo. She received her PhD from the Department of Biostatistics at the University of Michigan, working with Professor Peter X.K. Song. Her research interests lie in developing real-time analytics to address methodological needs in the analysis of streaming data such as mobile health data. Her dissertation work focuses on developing real-time regression methods for both cross-sectional and cluster-correlated data streams under homogeneity assumption, as well as data streams with dynamically evolved batch-specific effects in state space mixed models. Welcome to our department, Lan!

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

My research interests focus on developing real-time analytics to analyze streaming data, with an emphasis on incremental statistical inference. This topic is largely motivated by some primary features of Big Data such as large volume and high velocity.

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

I am truly grateful to my PhD advisor, Professor Peter Song at the University of Michigan. His tremendous support in the past four years changed my career path, from a student majoring in biology to a young professional in statistics. His passion about research and teaching had a big influence on what makes me feel that my current job is so meaningful.

What do you like most about teaching students?

I enjoy sharing my knowledge with my students and offering them help whenever they need it. Explaining different concepts and theorems to them and witnessing their growth in basic statistics knowledge gives me a strong sense of fulfillment.

What impact has the pandemic had on your teaching?

During Covid-19, even though I can still use my iPad to write out all derivation details, it's difficult to get feedback from students based on their facial expressions when we're online. Sometimes it makes it hard to get a sense of how they feel about the content I am talking about.

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

I would suggest that they seek opportunities to solve real-world problems beyond finishing assignments and exams in class. For example, try to find some research assistant positions during semesters and internship opportunities during summers to enhance computing skills.

How do you like to spend your free time outside of work?

I enjoy cooking and running.

in MEMORIAM

JONATHAN D. CRYER

Professor Emeritus Jonathan D. Cryer passed away peacefully at his home on December 11, 2019, after a long battle with ampullary cancer. Jon earned his PhD in Statistics in 1966 from North Carolina State University, Durham, and he worked with M.R. Leadbetter on a topic about level crossing by normal processes, with applications to reliability. Jon was hired by the University of Iowa (UI) in 1966, joining Allen Craig, Lloyd Knowler, Bob Hogg, Byron Cosby, James Hickman, John Birch, and Tim Robertson in the then newly created Department of Statistics, now known as the Department of Statistics and Actuarial Science. He retired from the UI in 2001.

Jon made profound contributions to statistical education. Back in the mid-1970s, Bob Hogg, H.D. Hoover, and Jon Cryer organized a two-week conference for mathematicians teaching statistics in small liberal arts colleges. These colleagues did not have appropriate statistical training and often relied on recommendations from professional societies in designing their own statistical courses. The conference organized by Jon and his colleagues introduced to these isolated statistics professors the importance of data analysis, robustness and using computers in teaching statistics. All were then cutting-edge ideas; their emphasis on using computers was especially forward looking given that computer programming in that time period required cumbersome card punching and long turnaround times from main-frame computers. It was a highly successful conference. A participant of that conference, Sister Paschel Hocum, wrote Jon a two-page thank you letter dated on July 30, 1977, in which she wrote, "You and your colleagues awakened in me feelings for statistics that I have long cherished in mathematics. It is fun, it is exciting, it is creative. Those feelings will have to be an asset when I teach Statistics second semester."

Jon was active in organizing and speaking in similar workshops for improving statistical education from teaching AP statistics to business statistics in business schools, including the annual weeklong STATS Workshop from 1993 to 1996, as well as the 1998 and 1999 Making Statistics More Effective in Schools of Business conferences.

Jon co-authored two well-known textbooks: *Time Series Analysis* (first edition published in 1986, and second edition in 2008, with Kung-Sik Chan being the second author) and *Statistics for Business: Data Analysis and Modeling* in 1991 (with Robert B. Miller). As alluded to earlier, Jon was an early proponent advocating the use of computers in statistical education. In the first edition of his *Time Series Analysis,* he integrated theory, applications and computing using Minitab to do data analysis and model fitting. His business statistics textbook took an innovative approach with a heavy emphasis on processes and quality, reflecting his broader view of statistics as "the study of processes and what [one] can learn from observing them." It emphasizes data analysis (the second edition contains a disk collecting over a hundred real data sets), experimental and survey design, while minimizing the use of formal probability theory and hypothesis testing. In a way, his books are harbingers of the trend that "books have begun illustrating statistical ideas using more and more data whether real or realistic." In addition, Jon co-authored the Minitab handbook (with Barbara F. Ryan and Brian L. Joiner) – a classic that is now in the 6th edition.

The importance Jon placed on real data in statistical education is well illustrated by a public flyer he sent to former students of his Applied Time Series class and other interested parties, on December 8, 1975. It advertised a "demonstration of various real time, continuous time, (and) time series techniques based on equipment provided by the Department of Physics... With the aid of the white noise generators, sine wave generators, filters, oscilloscopes, and a Hewlett Packard 3580A Spectrum Analyzer, we will be illustrating certain concepts of time series analysis."

Jon was elected a Fellow of the American Statistical Association in 1996, in recognition of his service to the profession and his contributions to statistical education. He received a University of Iowa collegiate teaching award in 2000. Jon was a gifted musician. He sang in his church choir his entire 53 years in Iowa City. In retirement, he played euphonium and string bass with several local musical groups in Iowa City. Jon was a passionate teacher, a gifted musician, and a gentleman, who will be greatly missed.

Class of 1949
Thurston P. Farmer
Cape Girardeau, MO (BA 1949) died in September 2019

Luther O. Forde
Minneapolis, MN (BA 1949, MS 1951) died in May 2020

Norman Greenberg
Washington, DC (BA 1949) died in November 2019

John (Jean) R. Robinson
Elmhurst, IL (BA 1949) died in October 2019

Class of 1950
Clint E. Edwards
Dacula, GA (BA 1950, MS 1951) died in April 2020

Rodger R. Patrick
Tampa, FL (BA 1950, MS 1951) died in September 2019

Class of 1951
Darrel J. Croot
Stamford, CT (BA 1951) died in July 2020

Class of 1958
C. Roland Boehm
Chesterfield, MO (BA 1958, MS 1961) died in May 2020

Class of 1961
Burdette C. Wheaton
Mankato, MN (MS 1961, PhD 1965) died in May 2020

Class of 1968
Bobby L. Vawter
St. Paul, MN (MS 1968) died in July 2020

Class of 1973
Douglas D. Eblem
Greenwood, IN (BS 1973, MS 1976) died in May 2020

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SAMPLER

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