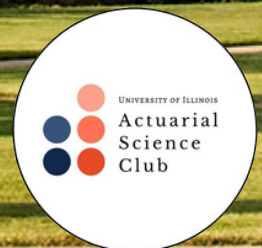


ACTUARIAL SCIENCE CLUB

ALUMNI NEWSLETTER

FALL 2022 EDITION



Editors' Note

About the Editors:

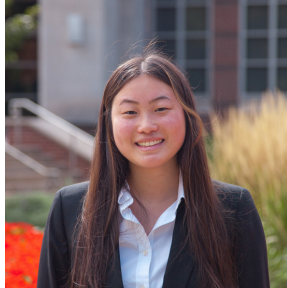
Stephanie Yang



Major: Actuarial Science
Year: Sophomore

Stephanie is the Publicity Chair and is from Elmhurst, IL. In her free time, she enjoys card games and hammocking.

Naomi Logan



Major: Statistics
Year: Junior

Naomi is the Vice President Internal and is from River Forest, IL. In her free time, she enjoys going on walks and painting.

Rose Gruss



Major: Actuarial Science
Year: Freshman

Rose is a part of the Publicity Committee and is from Park Ridge, IL. In their free time, they enjoy writing and playing DnD.

Isaac Zumpano



Major: Actuarial Science
Year: Sophomore

Isaac is a part of the Publicity Committee and is from Orland Hills, IL. In his free time he enjoys cooking and exercising.



Dear Alumni,

We are excited to present to you the Actuarial Science Club's Fall 2022 Alumni Newsletter! In this issue, you'll find updates regarding fall recruitment, university-earned credit (UEC), the iRisk Lab, faculty, and campus life.

The Fall 2022 semester brought a new sense of normalcy as the university lifted the mask mandate while still strongly suggesting masks during in-person classes. Covid testing remains readily available to students and community members.

Students demonstrated their resilience and adaptability as we navigated the return to an in-person Meet the Firms and the first semester of UEC courses. We are excited to see what the spring semester will bring and we hope you enjoy this edition of the Actuarial Science Club's Alumni Newsletter.

Go Illini!

Sincerely,
The Publicity Committee

CONTENTS

01

Altgeld Renovations

02

Fall Recruitment

05

Fall Events

06

Alumni Mentorship
Program

07

SOA Update: UEC

09

Illinois Risk Lab

12

Spring Webinar

13

Interviews

17

Faculty Profile

18

December Graduates

19

Union Feature

21

Illini Basketball

22

Acknowledgment



Altgeld and Illini Hall Renovations

Altgeld is a landmark on UIUC's campus that is home to the Mathematics and Actuarial Science Department. Illini Hall, another historical building, houses the Statistics Department. Both departments have seen enrollment increase by 117% over the past 10 years. The upcoming demolition of Illini Hall and the construction of a new mathematics facility will create much needed space for both departments as well as add a data science center that will serve as the Urbana-Champaign hub for the Illinois Innovation Network. Altgeld's renovation will restore interior surfaces, the Mathematics Library, and exterior stone. Elevators will also be installed for better accessibility. The project is aiming to achieve LEED silver certifications and the team will work closely with the Illinois State Historic Preservation Office to ensure Illini Hall's physical and cultural history is preserved. For more information, check out the [project details](#).

Altgeld Timeline

- 1897** Opens as University Library
- 1920** Chimes installed
- 1927** College of Law moves in
- 1956** Last significant renovation
- 1957** Department of Mathematics moves in
- 2023** Exterior renovation work begins. Interior renovations, including new classrooms, improved accessibility, new space for student organizations, and new research space, to follow



Illini Hall Timeline

- Opens as the YMCA **1907**
- Becomes the New Student Union **1919**
- Renovated and Police Training Institute Moves In **1978**
- Statistics Department Moves In **1985**
- Demolition and construction of a new facility **2023**
providing more space for Math and Statistics,
including almost a dozen new classrooms, to follow

FALL RECRUITMENT

Company Presentations

During the Fall 2022 semester, 21 companies gave presentations in person and virtually. Company representatives were able to illustrate their company's structure, culture, and career opportunities through presentations or interactive activities. These presentations gave students a chance to understand their career choices and various companies. At the end of the presentations, students were given the opportunity to ask individual questions. If you or your company is interested in presenting to our students, please feel free to reach out to our company presentation chair Kaia Hsu at companypresentations@asc-illinois.com.

August

- Pinnacle
- Old Republic International
- RGA
- KPMG
- Santa Barbara Actuaries

September

- Westfield
- CVS/Aetna
- CNA
- Oliver Wyman
- PwC
- Cheiron
- Deloitte
- State Farm
- WTW
- Zurich
- Mutual of Omaha
- ERIE
- Aon



October

- Milliman
- Blue Cross Blue Shield
- UPMC

FALL RECRUITMENT

Meet the Firms

This fall, ASC hosted Meet The Firms in-person for the first time in two years. Taking place at the I-Hotel on campus, this year's Meet The Firms featured over 25 companies and welcomed around 150 students. These students, ranging from freshmen to graduates, had the opportunity to meet with recruiters to learn about the company and discuss potential career opportunities.

Because it was many of our students' first time seeing an in-person Meet the Firms, preparation for the event was different compared to the previous two years. However, with helpful company presentations and workshops, along with alumni assistance, ASC members felt prepared and confident. Overall, this event received very positive feedback from both students and recruiters alike, urging us to keep Meet The Firms in-person for years to come.

"I thought that it was a great experience and was able to get some interviews for internships. I liked how I got a chance to speak to all the companies I wanted to."

"Meet The Firms was a great experience, especially for those like me with no prior experience."

"Meet The Firms was very successful, especially after being virtual for the past few years."

FALL RECRUITMENT

Meet the Firms

Consulting



Reinsurance



Insurance



FALL EVENTS

- Freshman BBQ 8/21
- Fall Kickoff 8/23
- UEC Info session 8/25
- Apartment Bash 8/26
- International Networking Group Kickoff 9/2
- Game Night 9/2
- Resume Workshop 9/8
- Club Dinner 9/9
- Elevator Pitch Workshop 9/13
- Quad Picnic 9/16
- International Club Dinner 9/17
- Mock MTF 9/19
- Interview Workshop 9/20
- CAS student conference 9/20
- Meet the Firms 9/21



- ACP Kickoff 9/29
- Apartment Crawl 9/30
- AMP Kickoff 10/5
- State Farm field trip 10/6
- Curtis Orchard 10/8
- Committee Kickoff 10/11
- Ice skating 10/12
- Course Selection workshop 10/20
- Life/Health vs P&C panel 10/24
- Bar Crawl 10/26
- Exam Study Tips Panel 11/2
- Coaching Actuaries/BA 2 Plus Workshop 11/9
- Barn Dance 11/10



ALUMNI MENTORSHIP PROGRAM

The Alumni Mentorship Program is an opportunity provided through the Actuarial Science Club. It gives alumni and current students the chance to share knowledge of the actuarial profession, and connect with each other on a personal level.

**Aleena
Ukkan:
Mentee**

"My most helpful suggestion I received was answering interview questions confidently and following the STAR method because sometimes recruiters take notes by separating responses into these four sections. The AMP meetings were very insightful when it came to the topics we discussed that ranged from choosing insurance/reinsurance/consulting to internship experiences."

"Being a mentor is one of the easiest and most valuable ways for me to give back to my alma mater. Throughout my time on campus I was fortunate to have many mentors guide me through my 4 years. I am thankful for AMP allowing me to give back and help others navigate their 4-years. By simply sharing my experiences and knowledge of the field, it allowed my mentee to gain valuable information to use in their 4-years and career search."

**Drew
Taylor:
Mentor**

**Emma
Hahn:
Mentee**

"I really enjoyed participating in AMP. From Meet the Firms advice to exam study tips to resume suggestions I gained a lot of insight from my mentor. Getting to know not only a UIUC alumni but an actuary currently working in the field was an eye-opening experience. I would recommend the program to anyone, especially freshmen who want to learn more about Actuarial Science!"

If interested in joining this program, contact Emily Hylbert at outreach@asc-illinois.com

SOA UPDATE: UEC CREDIT

The Fall 2022 semester marked the first semester of the University-Earned Credit (UEC) program for the University of Illinois. After being a Center of Actuarial Excellence for two consecutive years and successfully completing the intensive UEC evaluation process by the Society of Actuaries, UIUC became one of thirteen universities globally to offer the UEC program. Students who obtain the required scores in the UEC course(s) have two years after the completion of the last course in a series to pay the regular exam fee and submit a UEC Candidate Application to receive exam credit if they wish.

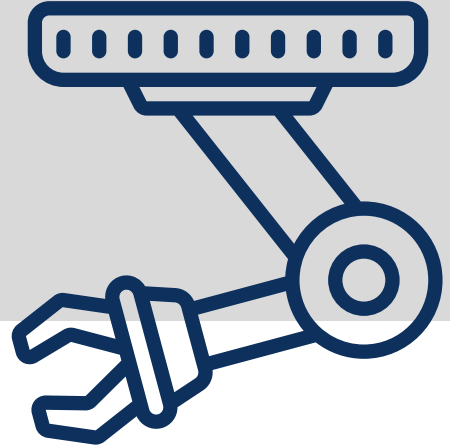
There were 4 courses offered in Fall 2022 that were eligible for UEC. The University of Illinois' Actuarial Department is pleased to announce that they will be offering UEC for all six eligible SOA exams in the Spring of 2023. The courses are listed on the next page.

SOA UPDATE: UEC CREDIT

Fall 2022	Spring 2023
ASRM 210 (FM)	ASRM 210 (FM)
ASRM 471 (FAM_L)	ASRM 471 (FAM_L)
ASRM 461 (FAM_S)	ASRM 461 (FAM_S)
ASRM 469 (ASTAM)	ASRM 469 or ASRM 561 (ASTAM)
	ASRM 472 or ASRM 575 (ALTAM)
	ASRM 450 and ASRM 499/SRM (SRM)

Students interested in joining the Casualty Actuarial Society are not left behind. The Actuarial Science Department aims to revert ASRM 469 to Ratemaking and Reserving or Casualty Actuarial Mathematics, which covers a big percentage of Exam 5 on the CAS exam pathway. In turn, a new UEC undergraduate course for ASTAM is in the pipeline for the 2023-2024 academic year. The department is hoping to have the new course approved by the hierarchical university curriculum committees (Departmental, Faculty and University) by Fall 2023.

iRisk Lab



What is IRisk Lab?

Officially established in Fall 2018, the Illinois Risk Lab (IRisk Lab), in the Department of Mathematics at the University of Illinois at Urbana-Champaign, grew out of the Research Program in Risk and Actuarial Science, which was sponsored by the Society of Actuaries from 2014 to 2017. The IRisk Lab currently serves as an industry academic collaboration hub, facilitates the integration of discovery based learning experience for students, and showcases state-of-the-art research in all areas of Risk Analysis and Advanced Predictive Analytics.

Opportunities include research projects, student consulting, research seminars and the Risk Analytics Symposium. Faculty, industrial partners, and students collaborate to address business-oriented research problems. Throughout the semester, students will gain real-life experience in innovative research, collaboration, and presentation skills. Besides, our industry partners will be able to access the latest progress and new perspectives from our collaborative research, and identify potential future employees from our student researchers.

Contact irisklab.uiuc@gmail.com for University and Industry collaboration

FALL PROJECTS:

- Algorithm Bias and Interpretable AI
- Federated Learning for Facilitating Privacy Preserving Collaboration
- Representation Learning for Insurance Products
- Spatiotemporal Modeling on Foot Traffic Data to Unlock Auto Insurance Geo-risks

Algorithm Bias and Interpretable AI

Artificial Intelligence or Machine Learning algorithms have been widely implemented in various industrial applications. Sometimes, these ML algorithms exhibit significant bias, Algorithm Bias, to certain groups. Algorithm Bias refers to the inequality brought by the application of algorithms regarding personal features like socioeconomic status, race, gender, etc.

One of the most challenging problems with combating Algorithm Bias is that non-parametric ML models like Support Vector Machines and models with excessive number of parameters (hundreds of thousands or even hundreds of billions) like deep Neural Network are usually difficult for interpretation. One of the ways researchers solve Algorithm Bias is through Explainable AI and Interpretable AI where the process of decision-making is transparent and easily understandable.

Federated Learning for Facilitating Privacy Preserving Collaboration

Due to privacy and data confidentiality concerns, today's insurance industry is rife with the protectionism of proprietary data, which has become a major roadblock against the free flow of data and collaborations between data scientists and analysts. The inaccessibility of data across the boundaries of insurance firms or business divisions within a corporation makes it difficult to develop comparative analysis and uncover business insights that can only be learned from the aggregation of data.

Federated learning has been proposed in recent years as a privacy-preserving solution to collaborative machine learning tasks. It allows data owners to build a model without sharing sensitive data with each other. This technique has the potential to make an impact on addressing the data concerns in the insurance industry. In this project, we will learn and implement some popular federated learning algorithms and explore their potential insurance applications.

Representation Learning for Insurance Products

With the fast growth in computing power and the development of machine learning techniques, more features are used in predictive analysis in various aspects of insurance, such as rate making, loss reserving, or risk management. Most of the numerical or categorical variables can be easily thrown into a machine learning model, but the unstructured text data remain largely under-utilized.

One way to use text data is feature engineering, which involves manually creating algorithms to extract information from the text, such as the word count or sentiment analysis. This approach provides a “measurement” for the entire text that can be easily interpreted, yet discovering new features usually requires domain knowledge and is time consuming. Researchers have started using Natural Language Processing to facilitate textual analysis. While many of the deep learning models succeed in improving prediction accuracy for the response variables, they often provide little tractability and interpretability, which are of importance in decision making as well.

Spatiotemporal Modeling on Foot Traffic Data to Unlock Auto Insurance Geo-risks

Foot traffic data is captured by various sources, such as smartphone APPs or telematics devices in the vehicle, which can help insurance monitor policy holders’ behavior. It is beneficial for insurance companies to price the risk accurately and accelerate the underwriting process. On the other hand, policyholders are given incentives for good driving behavior. There are various state-of-the-art techniques to extract useful information from the high-dimensional foot traffic data, including spatial and temporal analysis, and geospatial analysis.

In this project, we intend to create spatial and temporal models to identify the policyholders’ driving behavior in certain Census Block Groups or city/county levels and provide guidance for auto insurance geo-risk. Currently, we are investigating the association between accident and foot traffic based on the 2018-2019 vehicle accident report from Indiana state.

Spring Webinar

During Spring of 2023, the Actuarial Science Club at UIUC will host the Innovation in Insurance Webinar Series. For the past few years, the club has hosted the annual Spring Symposium using a variety of different formats and platforms. The virtual structure of a webinar series will allow us to reach a wider audience and have speakers with more diverse backgrounds.

This event will bring together experienced business leaders from the actuarial world to share their expert insight on emerging trends within risk management and insurance. This year's webinar will explore how technology and regulations have created new challenges in insurance and how actuaries deal with them. Attendees will have the opportunity to understand the impact of AI in the auto insurance industry, how block chain has had an impact on overall security and cyber insurance, and how regulation in health insurance has caused insurers to re-develop their health plans.

Anyone is welcome to join this year's webinar, including alumni. If you are interested in participating, please contact Naomi Logan at vpinternal@asc-illinois.com or Pooja Khatri at workshops@asc-illinois.com for more information about the event.

Interview: Eric Icaza

Eric Icaza is an Instructor of Actuarial Science and Risk Management at the University of Illinois Urbana-Champaign. He is an alumnus of the ASRM program at University of Connecticut, as well as Math programs at both University of Connecticut and University of Illinois Urbana-Champaign.



Q: What courses do you teach?

E: This semester, I'm teaching three courses. The first one is ASRM 195, Foundations of Data Management. It goes over Excel, VBA, and R. We talk about how you can bring in data, manipulate it, and functions that allow you to use data in ways that are appropriate in actuarial science. My second course is ASRM 410, Investments and Financial Markets. This semester was the last semester the SOA provided seating for Exam IFM, Investment in Financial Markets. So this was the last chance that a lot of students had to take this exam. ASRM 410 goes over options, derivatives, and pricing for derivatives and options. The last class that I taught this semester is ASRM 533, Risk Regulations Practices. It goes over how companies manage their risk, how companies can best prepare themselves for the uncertainty of the future, and the sort of legislation that has come about due to past financial crises. A big component of ASRM 533 is thinking about the 2007 financial crisis: how we got into that scenario and how companies can, in the future, protect themselves against the downturns that we saw during that time.

Q: What do you find most interesting about ASRM?

E: Actuarial Science is one of those applied fields where you can really imagine the applications in real life. Especially for me, I deal with insurance stuff relatively frequently, having to purchase insurance for myself and making sure that my car and my apartment is covered with insurance. Knowing how to get into the details of that and actually being able to solve a real world problem, I think that's one of the most interesting parts of actuarial science. I also find the emphasis on professional development to be a key component to actuarial science that really drew me in and made me stick around; knowing that I'm encouraged to take exams, to learn more, and to improve upon myself made me feel really comfortable joining the ASRM community and continuing to be a part of it today.

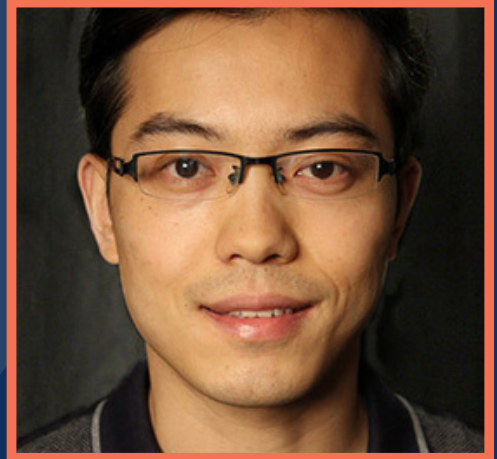
Q: If you could give one piece of advice to new ASRM students, what would it be?

E: The thing that helped me out the most - besides the most obvious advice like passing exams and studying hard in order to do well - an aspect that I wish that I had taken more to heart was to get to know the people that are around me in my community. When I was in undergrad, I was not a part of the Actuarial Science Club or really looking at different aspects of the actuarial science community. I feel like I really missed out when I became a graduate student, because once I became a graduate student and knew more certainly what I wanted to do, that's when I spent more time focusing on the people that were around me who were able to provide me support and help me figure out how I could get a full time position when I was to graduate. So I would recommend that all ASRM students get to know the people in your program, get to know the upperclassmen, and let them help you achieve your goals.

Interview: Wei Wei

Dr. Wei Wei is an Associate Professor in the Department of Mathematics at the University of Illinois Urbana-Champaign.

He conducts research on topics in actuarial science and related fields, including cyber risk management, decision-making in insurance, dependence modeling, and stochastic comparison. He has 10 years of experience in teaching actuarial related courses. He is an Associate of the Society of Actuaries.



Q: What courses do you teach?

W: ASRM 499 with the title Generalized Linear Models. This is a new course we are experimenting on under the course label ASRM 499. We plan on making it a regular course with its own course label starting next year. The motivation of creating this course is to enhance our students' knowledge on the core techniques that are intensively used in P&C insurance. In the past design of our curriculum, we put more focus on life insurance but not adequate in P&C insurance. The addition of this course will fill this gap.

As for the specific teaching, I try to balance theory and practice. For example, we perform case studies on how to solve standard problems, and then I teach the theory behind the models. By doing this, students will understand the connection between different models and how they can be extended. When they are encountered complicated situations in practice, they will know how to edit and extend existing models to solve the problem. Through this kind of training, we hope to enhance our students' competitiveness in the job market when they graduate.

Q: What made you choose UIUC as the school to teach at?

W: Firstly, because the program is large, I knew there would be many outstanding students to work with. During the interactions with students in my interview, I already found them professional, enthusiastic, and highly motivated. I got the impression that it would be very enjoyable to work with them. This impression was further strengthened when I started to formally work here. Another reason is that the faculties members here have a well-diversified set of expertise, and they are conducting very exciting research. The expertise and research well connect to mine. I believe joining this program will promote a lot of collaboration opportunities and interdisciplinary research projects.

Q: If you could give one piece of advice to new ASRM students, what would it be?

W: My idea is that students starting in actuarial science should keep their minds open. When talking about actuarial science, the first impression coming to people's mind is usually insurance company or pension business. I would like to strengthen that modern actuarial science has developed way beyond that. When they search for jobs or internships, they should be aware that there are many opportunities outside of the core areas within the insurance industry.

There is an old saying about this profession: no risk no insurance. It indicates that the subject of actuarial science is built upon the analysis of risks and uncertainties. With the modern development of actuarial science, I think it is safe to state its reverse: wherever there is risk and uncertainty, there is room for actuarial science.

Faculty Profile



Tim Cardinal
Instructor



Stefanie Klajbor-Goderich
Academic
Advisor



Runhuan Feng
Professor
Director of
Actuarial
Science



Claudia Freiji
Instructor
Academic
Advisor



Xiaochen Jing
Assistant
Professor

Frank Quan
Assistant
Professor



Eric Icaza
Instructor



Richard Sowers
Professor



Wei Wei
Associate
Professor



DECEMBER GRADUATES

CARLI ALLEN

BILAL AYUB

ZEKUN CHEN

RITA CUI

BILLY DYRA

MATTHEW FIGUERAS

LUKE JANIKOWSKI

CARSON LOWERY

NOLAN MURPHY

KENAN PATEL

HAO QUAN

TANVI SANGAM

TYLER TRAN

ANDY WANG

ANDREW WU

SHASHANK YERRAGUNTLA

YINING ZHAO



Union Feature

Every Monday night, students love to drop by the Courtyard Cafe to study, enjoy Starbucks, and listen to some free live music of all genres. Musical Mondays feature a variety of bands, including an on-campus favorite: freshman Josh Spinner's band "Spinner and the BELZ"!

For students that can't get enough trivia, the Courtyard Cafe also holds Tuesday Night Trivia. With monthly special game show features, any student with a niche knowledge base can win a prize.

For students that like to sing, there's karaoke every Wednesday night. Catered by the Einstein Bros in the Union basement, this event is a weekly favorite for any and all musically-inclined students. A new host will be coming this spring semester, as the current host Madeline is graduating! We wish her all the best.

Students that prefer comedy love to drop by the Friday Night Funnies at the Courtyard every week. Student-formed, on-campus improv groups take the stage by storm. Even students that don't like improv can enjoy stand-up comedians from around campus, or even the national comedians that sometimes grace the Union stage!

For students that don't want to perform or watch performances, IlliNites is the perfect activity. Creative students drop in for free late-night crafts and snacks with friends. Once a month, students that like to get crafty can stop by for events such as a festive gingerbread house making contest, followed by a screening of the holiday favorite "How The Grinch Stole Christmas".

Union Feature

Sports fans from all over campus love to drop by the Union to watch the World Cup with their friends. Students flock to the viewings to catch their favorite team and eat free food inspired by Qatar! With the Courtyard Cafe seats reconfigured into rows facing the big screen playing the game, it's the full stadium experience for any attending students.

And speaking of broadcasts, cinephile students love the Union's Weekend Films. The Pine Lounge's comfy chairs and quiet atmosphere make it the perfect place for any movie-loving student to curl up with their friends and watch the weekly pick of a newly released movie.

Students also love the Union Art Gallery. Featuring gorgeous artwork created right here on campus, the serenity and beauty of the Art Gallery can't be overstated. Students love checking out the cool, new art made by our fellow Illini. Additionally, creators on campus have the opportunity to show off their own art by applying to be featured.



ILLINI BASKETBALL

Image credit: UNIVERSITY OF ILLINOIS / FRED ZWICKY



At the end of the 2021-22 season, the future of Illini basketball seemed very up in the air, due to players like Kofi Cockburn, Trent Frazier, and Damontae Williams finishing up their impressive Illini careers. After the departure of ten total players, many were unsure of the direction that Illini basketball was heading. Then, the transfer portal opened. During this offseason, Illini basketball picked up coveted transfer players Terrence Shannon Jr, Matthew Mayer, and Dain Dainja, all of whom have made a noticeable impact on this Illini team just a couple of months into the season.

Along with these pickups, the Illini have also added four recruits: Skyy Clark, Ty Rodgers, Jayden Epps, and Sencire Harris. The four recruits along with the three transfers have helped transform this team into an entirely new identity than the year before. Every game there is someone new stepping up, making this team much more dynamic than we have seen in previous years.

Although the roster assembly has given Illini fans something to look forward to, the team has had plenty of ups and downs. The Illini started off the season boasting a 4-0 record, including an impressive win over the then-ranked 8-seed UCLA squad. In their next 6 games, they had a 3-3 record with losses to Virginia, Maryland, and the unranked Penn State. During this stretch, they also managed to defeat the number 2 overall-ranked Texas Longhorns. Starting in January, the Illini begin a difficult two-month stretch of Big Ten basketball, which will be their toughest test yet. The next two months will give this new Illini team the chance to prove themselves. We look forward to watching this untested team for the rest of the season, ILL!



Image credit: UNIVERSITY OF ILLINOIS / FRED ZWICKY

Acknowledgment

Special thanks to...

Claudia Freiji

Aleena Ukkan

Emma Hahn

Drew Taylor

Emily Hylbert

Stefanie Klajbor-Goderich

Eric Icaza

Wei Wei

Frank Quan

Actuarial Alumni Community

2022-2023 ASC Executive Board



Top Row (left to right): Anika Chakraborti, Stephanie Yang, Kaia Hsu, Pooja Khatri, Emily Hylbert, Ethan Lin
Bottom Row (left to right): Anna Schulz, Ted Conneen, Luke Janikowski, Daniel Polites, Naomi Logan, Sam Jourdan