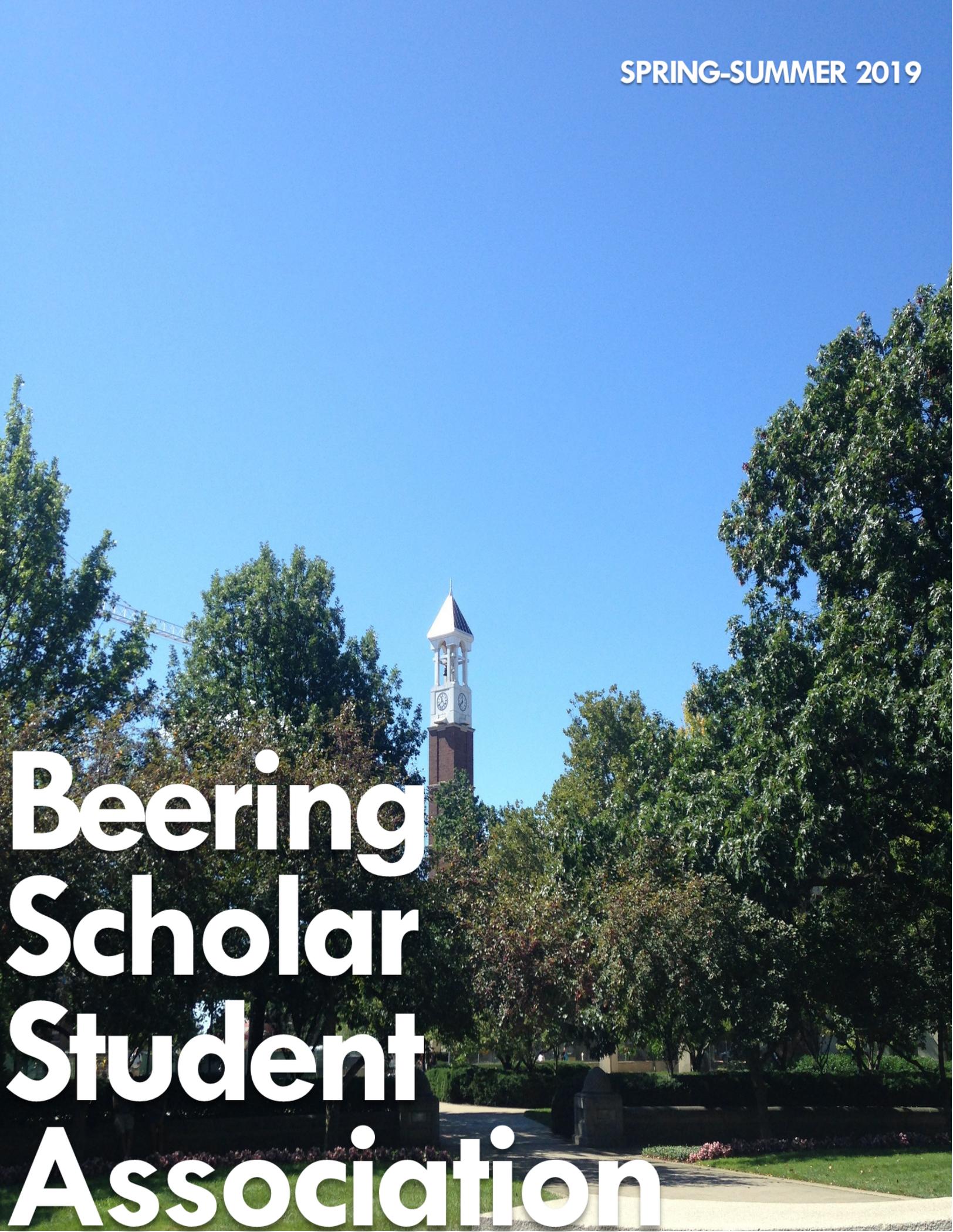


SPRING-SUMMER 2019



Beering Scholar Student Association

LETTER FROM THE BSSA PRESIDENTS

Fellow Boilermakers,

From having classes cancelled due to weather for the first time since 2014 to Purdue Basketball's first Elite 8 run since 2000, the 2019 spring semester has been an adventure. AS Purdue celebrates its 150th anniversary by looking back on its rich history and looking forward to the innovations Boilermakers continue to pioneer, the Beering Scholar Student Association would like to follow suit.

In this issue, we say farewell to our graduating seniors. Throughout their time here, these individuals have been our role models, mentors, and, above all, friends.

From pursuing exciting career opportunities to continuing their education here at Purdue through the Beering Scholarship, our seniors are achieving great things. We're ecstatic to share their insights on how the Beering Scholarship has transformed their four years here. At the same time, the Beering Scholars looked to the future with our annual New Scholars Day, when we welcomed prospective Beering Scholars to our community. As always, we loved getting the chance to meet the New Scholars through a personalized day packed with tours, information sessions, student panels, class shadowing, and games. We are beyond excited to welcome the incoming freshmen in the fall.

As a group, we continued traditions such as community service. This semester, that entailed volunteering at an animal shelter and helping out at a community Easter egg hunt for kids. For the third year, we organized a faculty mentor program with the support of the Honors College to foster connections between underclassmen and faculty in fields that they are interested in. Finally, we spent quality time with each other through a movie night and senior send off dinner, during which we celebrated the achievements of our seniors. We would also like to highlight the activities of individual scholars. From volunteering at local hospitals to studying abroad in Dublin to trying new fitness classes together at the Co-Rec, the Beering Scholars have kept busy!

As yet another academic year comes to a close, we would like to reflect upon the incredible opportunities that we are so fortunate to receive. We would not be here without the invaluable generosity and support from the Beering Scholarship donors, Honors College advisors, mentors, family, and friends. For that, we cannot thank you enough.

Boiler Up!

Kat Li and Garrett Mulcahy

Class of 2021



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GRADUATING

Gina Clepper

Degree: BS Electrical Engineering

Hometown: Gahanna, OH

Next Steps: MS Electrical and Computer Engineering at Purdue

I've come to realize that the Beering Scholarship is more than funding. It gives you permission to pursue the things that excite you, confidence to know someone else believes in you, and a group of incredible peers to inspire and support you.

Because of these gifts, I was able to major in electrical engineering and minor in English and art. There were many nights of context switching from drawing in PAO's studios to debugging in the EE labs, but I wouldn't have wanted it any other way. I had freedom to explore unexpected opportunities as they arose, from working on botany research in a greenhouse, to testing new haptic communication methods, to completing a thesis in poetry. Outside of class, I had time for outreach with the newly founded Women in Electrical and Computer Engineering committee and other organizations. I also studied abroad in Shanghai for three months. China offered freedom and challenges, both to a degree I had never experienced before. I came away with a deeper understanding about my own ignorance of the world as well as a big serving of self-confidence in my own resilience.



Paige Rudin

Degree: B.S. Veterinary Health Engineering

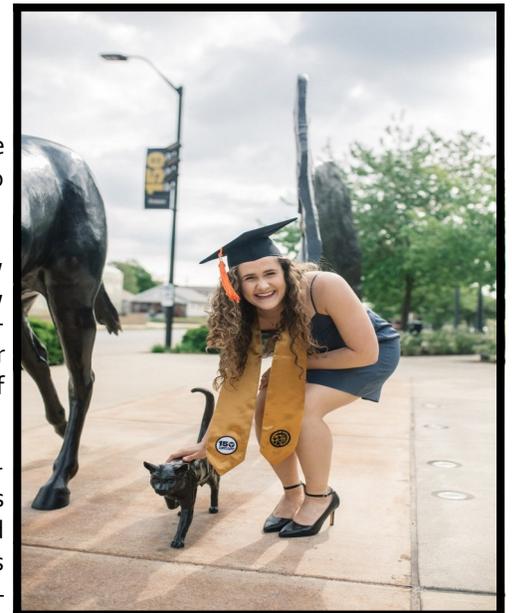
Hometown: Carmel, IN (or Peoria, IL)

Next Steps: Interning at the Pan American Health Organization's Climate Change and Environmental Determinants of Health Unit this summer before returning to Purdue's College of Veterinary Medicine in the fall.

I blinked. I blinked, and four years passed in a flurry of papers, exams, late nights, early mornings, light laughs with friends, deep talks over coffee, high days, low days, and beautifully average days. More than any other memory or moment, I will remember the people of this place—their collective wisdom, their patience, and their confidence in me continue to make me feel remarkably undeserving of the honor of the Beering Scholarship.

The Beering freed me to invest my time in others, in campus, and in myself. It fundamentally altered my collegiate experience. I changed my major; updated my plans for graduate school; poured myself into student organizations and research; studied abroad in Peru, Haiti, Spain, and Romania; and surrounded myself with the humans of the Beering community, who are among most exceptional and brilliant servant-leaders West Lafayette has to offer. I learned to follow the people: Find good people doing good work that strikes a chord within you, and jump in.

I suspect—actually, I'm sure—that my appreciation for the profound impact of the Beering Scholarship on my life will only deepen with time. Thank you to the donors who made this opportunity possible and to those on campus who continue to honor its tradition. I am looking forward to another four years surrounded by red brick, and I am ever grateful, ever true.



SCHOLARS

Andrew Kaskie

Degree: B.S. Actuarial Science, B.S. Applied Statistics

Hometown: Seymour, IN

Next Steps: MS Economics through Krannert

It feels fitting that my senior year falls on the sesquicentennial founding of this extraordinary hallmark university. The campus-wide theme, 150 Years of Giant Leaps, is an allusion not only to Armstrong, but also to the incredible leaps that generations of Boilermakers have made at Purdue University and beyond. Reflecting on my experiences at Purdue, I recognize that the Beering Scholarship was a catalyst for the giant leaps that I took in my academic, service, and leadership formation, especially within the Honors College. The welcoming and close network within the Beering Scholar Student Association helped my transition into the Honors College Community and opened numerous doors of opportunity. Developing strong relationships with faculty, connecting with first-year students in the Mentor program, and immersing myself in unique Honors College courses have all inspired me to take ownership within this creative and diverse community. Its pillars became the foundation for my college success and drove me to take on campus leadership positions, plan service projects, conduct research, and ultimately, aim for the moon. I am ever grateful to Dr. Stephen C. Beering for his generosity in empowering myself and other Beering Boilermakers to take giant leaps in the Purdue community, in our professional careers, and in our personal lives. This post-graduation summer, I will be living out this theme by taking perhaps my biggest leap yet, as I bike across the country to raise awareness for those with disabilities.



Investigating Ireland

By Laura Galles, Brain and Behavioral Sciences '21

In Spring 2019, I was blessed to travel to Ireland and study Psychology at University College Dublin (UCD), a school with a vibrant history of its own. It first opened in 1854 as the Catholic University of Ireland in downtown Dublin near St. Stephen's Green, with John Henry Newman as its first rector. Its original buildings remain downtown, and countless locals can recall attending class in what are now office buildings. Dublin is a town filled with quite a lively culture of its own. On nearly every street corner or within each Irish pub is a local music performer trying to make-it onto the Dublin Wall of Fame. The Irish people are some of the most courteous, genuine people I have ever met. They're extraordinarily apologetic, and they lookout for their neighbors, always willing to help a stranger in need.

I had never left the country or traveled anywhere alone before this experience. Throughout the semester, I grew from a timid foreigner to a savvy-local-student, helping navigate my new friends and I across Europe and exploring a new area almost every weekend. I learned local bus-routes across the island, which is the most cost-effective way to travel throughout Ireland. I was also able to see two of my favorite bands: *Twenty-One Pilots in Dublin* and *Dublin The Script while visiting London* (thanks to Beering alum Abby Lemert who was able to mail me my "UK-exclusive" ticket. I made sure to thank her personally on my visit to Edinburgh.)

After I grew comfortable navigating Dublin and had visited the most-popular sites, I traveled with a few UCD students to Galway, Northern Ireland's Giant's Causeway, Cobh and County Cork, Belfast, and Killarney, Glendalough, and Connemara National Parks in Ireland. Additionally, I spent spring break exploring Venice, Rome, and Barcelona, and I spent the remaining weeks after classes ended in Paris, Amsterdam, Fatima, and Lourdes. Each city was unlike any other, and I cannot possibly choose a favorite.

Throughout the school week, I was involved in multiple student societies, including the International Student Society, Erasmus Student Network, the Film Society, and the Newman Society. In addition to Ireland, I made friends from Spain, Italy, Amsterdam, Germany, and Austria, and each was able to give me personalized recommendations for areas I had never thought I'd be able to see. I also took 6-weeks of Irish lessons, which is more conversational Irish than most native students know. Although Irish is still spoken in the rural areas of Ireland, most local students don't tend to learn, use, or appreciate it as much. Only recently has Ireland been making an active effort to promote the language and its culture through street signs and tourist destinations. Lastly, I was able to participate in the Irish Cancer Society's Relay for Life with the Newman Society, which was an incredible service and bonding experience.

I think it is fitting that there is no word for "goodbye" in Irish. Instead, the Irish say "Slán," which directly translates to "Health/Safety." Even when parting ways, the Irish people wish one another the best. I learned more about myself within the last four months than I ever could have imagined. I will definitely be leaving behind a piece of my heart with the people in Ireland and my new friends, but I know that I will return a wiser, more resilient, and well-rounded soul.



Venice, Italy (Burano Island)



La Sagrada Familia, Barcelona



Cliffs of Moher, Galway, Ireland



Trinity College, Dublin

Cruising Through Costa Rica

By Grace Johnson, B.S. Natural Resources and Environmental Science, May 2022

Environmental sustainability and agriculture were presented to me as opposing ideas as I grew up in the Panhandle of Oklahoma. I saw little common ground between farmers and environmentalists and their goals simply did not align. Harboring these misconceptions when I came to Purdue, I had reservations about joining the College Agriculture while pursuing my interest in environmental sciences. After spending Spring Break venturing through four different eco-regions in Costa Rica, however, I was able to reshape my views on both animal agriculture and crop farming. There would have been no better way to discover the complex and critical relationship between agriculture and environmental sustainability than to participate in the Purdue College of Agriculture's Community, Agricultural, and Environmental Sustainability study away program.

While I was in Costa Rica, I quickly found that sustainable agricultural practices have the potential to conserve natural resources, benefit the environment, and sustain a community. Standing in the middle of the Mi Cafecito coffee plantation, I witnessed a natural form of irrigation that eliminates the need for mechanical systems and mitigates heavy rainfall on crops. Venturing through the Dole Banana Plantation, I was able to see an agricultural corporation make packaging choices that divert waste from landfills. While visiting Pacquera Professional High School, students showcased the techniques they use to sustain Costa Rica's natural environment while growing native crops, as well as the communication techniques they learn to share these practices with others. Finally, there was no better way to end this experience than by having steak from a carbon-neutral cattle farm!



Student Activity Spotlights

Science Olympiad!

By Khunsha Ahmed, B.S. Health Sciences Pre-Professional, May 2022

Sports were never my strong suit, let alone the Olympics, but one of my favorite ways to define myself is as an Olympian, a Science Olympian that is. Science Olympiad is a STEM organization/ competition present all across the country and is open to middle and high school students. It was one of my personal favorite clubs to be a part of during high school as it allowed me to branch into fields of science ranging from Human Anatomy and Physiology to Fossils to Circuit Lab. Through Science Olympiad, I grew as a scientist and as a learner, and was keen to continue my journey. Fortunately, Purdue has a Science Olympiad organization as well, but the tables turn as you become the one writing the test rather than taking it. I was able to work with other Beer-ing Scholars as we hosted the Purdue Regional Science Olympiad competition this past February here on campus. Kat, Garrett, Melanie and I were able to work together on competition day and meet some of the brightest new scientists!



Purdue Student Concert Committee

By Bryce Colon, B.S. Pharmaceutical Science and Sociology, May 2022

In August of 2018 I began the process of interviewing for a position on Purdue's Student Concert Committee (SCC). The 16-member committee organizes both large and small concerts, seeking to bring the enjoyment of live music to a stereotypically STEM-oriented campus. The committee also oversees the allocation of its own funds to other music organizations on campus to promote the culture of concert-going.

This winter the committee brought the headliner Young the Giant to Elliott Hall of Music, a band that would fit into the genre of alternative rock just as well as indie pop. Sure Sure, an art pop band from Los Angeles, opened for Young the Giant. The band's duality helped appeal to a broad range of students, and the turnout was wonderful.

The night before, we go to supermarkets in order to buy things on the lists the performers crews have provided. Sometimes, this means buying 30 towels! Show day is a big day for the committee! We must work alongside Purdue Dining & Catering in order to provide meals and drinks to the performers and the crews they tour with. We also watch stage doors to make sure no students wander into sound checks. Finally, we photograph and record the event in order to promote it on our social media.

SCC is a two-year commitment and I will transition onto the executive board in the 2019-2020 school year as a "Research Co-Chair." My role involves researching artists who would draw a large crowd and contribute to Purdue's music culture. Although SCC is not necessarily related to my major, I am passionate about building up Purdue's music scene. We may not have a school of music, but Boilermakers still know how to appreciate it!

Astrophysics, Neutrinos, oh my! By Andrew Santos, B.S. Physics, May 2020

I am a biophysics junkie but an astrophysics guy at heart. I like to sum up my attitude toward research in two words – creativity and rigor. Maybe it comes as a surprise to hear me dangling the word “creativity” around the theoretical and experimental work I do in astrophysics. Hopefully I can convince you of how awesomely true this is in one short page.

For context, my current research lies at the intersection of neutrino astrophysics and radioactive decay. This is under the advisement of Dr. Ephraim Fischbach in the Department of Physics and Astronomy. To explain how insane this marriage of topics is, I like to portray it in the following way... Neutrinos are tiny particles that are unbelievably antisocial; billions of them pass through your thumbnail every second, but I am certain you have never said, “ouch, I’ve been bitten by a neutrino.” Similarly, radioactive decay (i.e., matter breaking down over time) does not listen to its environment; it will break down however it wants.

Here is the punchline. Our research presents evidence that neutrinos and radioactivity could be talking to each other. In practice, this could give rise to technologies that predict dangerous solar storms or that approach nuclear medicine more precisely. It is our group’s goal to either uncover the new physics behind this evidence or to find an alternative, more traditional explanation. We approach this work from both the theoretical and experimental angle, and I have had the privilege of contributing to these two areas over the past year and a half. I will explore each quickly below.

First, evidence for new physics requires a mathematical framework that captures the underlying interaction. Due to this, every research meeting includes a debate surrounding different proposed mechanisms. We often start with the simplest of assumptions and then test our ideas against the data. For example, it was proposed several years ago that the evidence for neutrino-radioactivity interactions was simply from instrumentation messing up. The group quantified the effect of such an error, analyzed the instruments that had been used, and concluded that instrumental effects did not sufficiently explain the evidence. The majority of my work, by the way, has been to remove as many assumptions as I can from our old frameworks.

Secondly, fresh ideas should be tested in experiment whenever possible. My personal story to this point is what I call the Gold Sphere War. It just so happens that one way to test our proposed mathematical framework is by hanging a decaying sphere in a vacuum chamber and periodically banging it against the metal walls. This is a gross simplification (I will refrain from going into too many technical details), but Dr. Fischbach and I went back and forth for an entire semester about whether such a sphere would explode – I was in the Everything-Will-Be-Fine Camp. I am happy to say that 95% of what I argued was horrifically incorrect, but the 5% that was correct won the war. The culmination of this work was submitted for publication recently.

Each week leads to new discussions and new ideas. As we toss around thoughts, our meeting space fills with flying packets of physics concepts. The white boards are painted with punchy equations, scribbles, and hastily erased mess-ups. I would not want to experience physics any other way, and I hope I have demonstrated to you how this research is as creative as can be.

The Beering Family

By Mili Jha, B.S. Aerospace Engineering and Computer Science, May 2022

Even before my formal introduction to college, I had been welcomed into the community of the Beering Scholars. With this group I shared some of my first memories at Purdue: touring campus and buildings I would someday have classes in; laughing over board games well into the night; and hiking in ankle deep streams behind boulders and walls of moss. It was also among these people that I found a community within a community.

Khunsha, Uche, Grace, and I form the self-coined Beering gals, and they are some of the people I have grown closest to this past year. We've celebrated birthdays together — with Uche and I walking to Walmart mere days after the polar vortex to decorate a cake for Grace, and when we drove downtown to paint pottery at All Fired Up. We've created our own holiday traditions, like Galentine's day with presents, a movie, and homemade baked goods. We've made time to have fun amidst our seemingly immutable schedules, and we've made time to have fun together.

Through a year of failing at escape rooms, quizzing each other before exams, watching corgis race a hundred-meter dash, yelling at video games, and (accidentally) setting fires in the Honors South ovens, we have made a great number of memories that I hold very close to me. I feel extremely lucky to have met the genuinely amazing people that are the Beering Scholars this year, and I know that the Beering gals in particular will be a radiant part of my life, far beyond our time at Purdue.



Dancing with the Beering Scholars

By Garrett Mulcahy, B.S. Mathematics, May 2021

As fall semester was wrapping up, fellow Beering scholar Kat Li and I began discussing our goals for the coming semester. We both wanted to exercise more and have fun while doing so, so we looked at the fitness classes offered at the Corec. We decided that we would give Zumba a shot for the spring semester. Zumba is an exercise dance program that gives a great workout while engaging in choreography that incorporates hip-hop, salsa, and other Latin dance styles. Upon starting Zumba, we were excited to realize that Maya Black, another Beering scholar, attends

Zumba as well! It has been a great stress reliever this semester and is something that I always look forward to during the week. Although the extent to which my dance skills have improved is debatable, attending Zumba with friends from the BSSA and other activities has been one of the highlights of my fourth semester here at Purdue!



New Scholar Day 2019

By Melanie Martinez, B.S. Genetic Biology, May 2021

Perhaps one of the most cherished traditions for the BSSA is New Scholar Day. It is our opportunity to show prospective scholars how Purdue University, the Honors College, and BSSA function as a community that is always available to support its students. Every year, we are excited to learn about the lives and passions of the students that earned this incredible opportunity, and we want to do all that we can to provide any supplementary information that will ease their college decision-making process.

This year, several current Beering scholars were able to sit in on the interviews and provide feedback to the selection committee. While this used to be a popular tradition, scholars had not sat on the panel for two years due to administrative purposes, and the selection committee greatly appreciated the details scholars provided to the candidates as well as evaluation they provided. The selection committee selected seven new Beering Scholars. Their residencies range from Missouri to Wisconsin, their majors pharmacy to aerospace engineering.

Six of these seven were able to come to New Scholar Day, where they were able to shadow current students, visit their academic departments, and mingle with other prospective Beering and Stamps students throughout the day. In the morning, students were introduced to several current scholars and taken on a tour of the residences by an Honors College Ambassador. From there, students were able to freely interact with other scholars, attend classes, and meet faculty members in their departments. Parents attended a panel hosted by current scholars as well as an informational session on financial aid. After dinner, we hosted a game night in the Beering Reading Room and played Codenames, What Do You Meme?, and Mafia. We were able to share laughs, experiences, and advice to the students throughout the day, and we hope that we can share more memories with them if they decide to accept their scholarship and attend Purdue in the fall.



New Beering Scholars after a successful game night!

Service and Socials

By Uchechukwu Nnate, B.S. Brain and Behavioral Sciences, May 2022



Service is an important value of the Beering Scholarship, which is why we volunteer together each semester. This spring, we were able to give back to the community by partnering with two organizations. The first was Almost Home Humane Society, a private, non-profit organization that serves more than 3,000 pets each year. We helped them organize their shed of crates, arrange their dog toys, and got to walk some dogs after we finished cleaning! The second event this semester was with McAllister Recreation Center, an organization that sets up activities for children and adults throughout the year. We volunteered during their Spring Celebration event, which provided free activities for children aged 1-7, including Easter egg hunts, balloon artists, and bouncy houses! We helped with set up, tear down, and ran the arts and crafts table. We even had time to get our faces painted! These were great opportunities to get involved with the community and we look forward to more volunteering events in the future!





We hope you enjoyed catching up with the Beering Scholars!

The world moves fast, and few places move faster than the world-class Purdue University. Our goal is to continue to build a Beering network, hearing stories from and offering opportunities to all.

Visit our BSSA website to find our upcoming events, study abroad and internship destinations, photo gallery, and newsletter archives:

<https://beeringscholars.wixsite.com/bssa>

Or email us at: purdue.beeringscholars@gmail.com

This newsletter would not be possible without the contributions of a great many. We would especially like to thank Dean Rhonda Phillips and Ms. Catharine Patrone, our BSSA advisors.

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