

PURDUE STAMPS SCHOLARS

2016



2017

FORGE
THE
FUTURE

LETTER FROM THE EXECUTIVE BOARD

Over the past year the Purdue Stamps community has grown to 28 scholars, adding six freshmen and two juniors as walk-on scholars. In October we hosted our very first conference for Stamps Scholars from around the country. About 50 scholars attended “Igniting Curiosity: A Stamps Symposium”, many of them freshmen for whom this was their first formal experience with the Stamps Family Charitable Foundation. This also provided an opportunity for scholars to meet and get to know each other prior to attending the Stamps Scholar National Convention in April. Additionally, we participated in the first Stamps National Day of Service and had many formal and informal gatherings. Many scholars have utilized their enrichment funds to travel abroad and to attend conferences this year as well.

At Purdue as a whole, the Honors College has now moved into its own building, Honors College and Residences. In addition to being home to over 800 honors students, the building includes numerous collaborative learning spaces and amenities such as Cosi Café. Honors classes and faculty offices are also housed in the Honors College and Residences (HCR). We were able to utilize the classrooms of HCR as well as Honors Hall during our conference.

Looking forward, we hope to continue to build the Stamps Scholars community at Purdue. We are beginning a mentoring program to foster closer relationships among our scholars as our group continues to grow. The idea is for each “Stamps Family” to be comprised of one person from each academic class and for them to meet amongst themselves and with other families outside of regularly scheduled Stamps gatherings. In light of the success of “Igniting Curiosity”, Purdue also plans to make this a biennial event, coinciding with the academic years of the national convention.

We wish the best of luck to all of the graduating Purdue Stamps Scholars and look forward to welcoming new freshmen and walk-on scholars this coming fall. Lastly, we would like to thank Dr. and Mrs. Stamps for their generosity in giving us many of the opportunities you will read about in the coming pages.



Boiler Up!

2016-17 Purdue Stamps Executive Board

Matt Cunningham

Claire Lee

Sarah Rodenbeck

GRADUATING SCHOLARS

PETER BOYD, St. John, IN

Majors: Applied Statistics, Actuarial Science, Math/Stat, Stat/Math; Minor in Management

Next Steps: Graduate school to obtain an advanced degree in Statistics, focusing on Environmental Statistics



Thanks to Stamps, I've been able to identify my interests and passions during my time at Purdue. The university and Stamps Family have given me so many opportunities to grow and make the most of my undergrad experience. Whether I was studying abroad in Ireland and Iceland, being active in student organizations, or just spending time with the great people I've met, I couldn't have asked for more from my Purdue experience. By working with professors at Purdue and researchers in Denali National Park, I've discovered that I can blend my social and academic passions, using statistics to promote environmental concern through informed policies.

A friend once told me to never become jaded by life; I hold onto this advice, making the most of each day and following the directions of my dreams. I hope to continue learning and growing by working and traveling around the world and making life one big adventure. Wherever I go in the future, I will have the amazing Purdue network to thank.

EMILY GRIMM, Newburgh, IN

Major: Industrial Engineering

Next Steps: Masters in Industrial Engineering with an emphasis in Healthcare Systems Engineering at Stanford University

Over the past four years, I have grown from a freshman with an undecided major, to a senior applying to graduate school for an Industrial Engineering masters degree. So many of the opportunities I have had over those years are because of the Stamps program! Through the enrichment fund, I was blessed to attend three short-term study abroad programs. On these programs, I have visited Vlad Dracula's castle in Romania, seen the Eiffel Tower illuminated at night, and worked with Italian students to learn about public health in Rome. These experiences have helped me step outside of my own worldview and expand my perspective.

Through the Honors College, I was pushed outside of my comfort zone to achieve greater things. Honors classes helped me to engage with my class material at a deeper level, and see beyond my "engineering mindset". Through the Honors thesis, I became involved with undergraduate research my junior year. This experience led to me authoring two academic papers and presenting my research at the National Institute of Industrial and Systems Engineers Conference in Anaheim, CA. If it were not for the Honors program, I would have never considered graduate school.

I would encourage freshman to pursue your passions! It is okay if you do not have everything figured out. As you go through college, you will discover new opportunities that you never knew existed.



GRADUATING

KATHERINE LIN, Broomfield, CO

Major: Biomedical Engineering

Next Steps: MPhil in Translational Biomedical Research at the University of Cambridge; Medical School



“Dreaming, after all, is a form of planning.” – Gloria Steinem

When I think back on the past four years that I’ve spent as a Purdue Stamps Scholar, I realize how perfectly Gloria Steinem’s words sum up how I’ve carved out my own path. Yes, I dreamed about conducting cutting-edge research. Yes, I dreamed about making an impact on my community. And yes, I dreamed about traveling the world and forging international friendships. Through the incredible support of the Stamps and Purdue University, I can say that these dreams have become reality.

As a biomedical engineer and aspiring physician, I am motivated to build the interface between technology and medicine through investigation of human ailments and regenerative medicine. My intellectual curiosity and self-challenge materialized as independent research to study bioadhesives for neurorepair. Through Timmy Global Health, I had the opportunity to serve on a medical brigade to Quito, Ecuador where I helped provide basic medical care. My experiences in Ireland designing cardiology devices and in Switzerland studying at ETH Zürich also made significant impacts in my academic and personal growth. In my local community, I worked with Greater Lafayette Special Services to tutor an autistic child. Even though I will be moving on from Purdue, I will always be proud and honored to be a Stamps Scholar and am thankful to everyone who helped me realize the first chapter of my book of dreams.

THERESA SAENZ, Michigan City, IN

Major: Materials Engineering

Next Steps: Fulbright research in Germany then PhD in Materials Science

I would never have guessed the variety of experiences that I’ve had during my time at Purdue. I’ve learned how to rock climb, had internships in California and Colorado, studied abroad three times, and worked on service projects reaching all the way to Nigeria and Nepal. Despite that range, I’ve found that often times, those experiences compliment each other in surprising ways. It was a English professor knowing about my interest in solar energy research that led to me getting involved in installing solar panels in remote villages, and my interest in the outdoors that first made me interested in Colorado, where I will be returning to this summer for the third time for an internship. It looks now like I had a clear path chosen from the start of my time at Purdue, but that wasn’t the case. Rather, one opportunity led to the next over and over again. I hope that offers some consolation to incoming freshmen who are worried about not having it all figured out. If you are opportunistic, work hard, and pursue your interests, you’ll very likely end up where you want to be.



SCHOLARS

MICHAEL WADAS, Munster, IN

Major: Mechanical Engineering; Minor in Mathematics

Next Steps: PhD in Mechanical Engineering at University of Michigan



My experience at Purdue University as a Stamps Scholar has been absolutely incredible. It seems like only a few months ago I was running around campus on a Stamps scavenger hunt the weekend before my freshman year began. And now, in the last semester of my undergraduate career, here I am ordering my cap and gown. How time flies!

Over the past four years I've had amazing opportunities by virtue of being both a Purdue student and a Stamps Scholar. I've worked with some of the world's largest engines at Caterpillar and consumer products that touch millions of lives at Procter & Gamble. I've conducted pioneering research and have become among the first to demonstrate the viability of biological protein detection via resonant frequency analysis. I've traveled to Brussels, Belgium to study computational fluid dynamics and to Burgundy, France to experience French wine culture first

hand. But most importantly, I've had the opportunity to interact with and learn from hundreds, if not thousands, of bright and talented individuals here at Purdue. The experiences I've had and the people I've met are responsible for shaping me into the person I am today, and for that I am ever grateful!

After graduation, I plan to continue my education by pursuing a Ph.D. in mechanical engineering with a focus on dynamics and vibrations. I will always hold the memories made over the past four years dear to my heart, and I cannot wait to make many more as I continue my journey. Boiler Up!

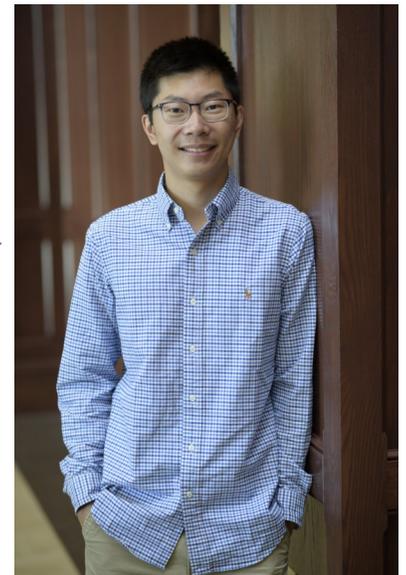
DANIEL SHYU, Columbia, MO

Major: Biomedical Engineering

Next Steps: University of Missouri School of Medicine

I love Purdue. To the point where my friends will often comment on my photos with #EverShyu, a play on Purdue's phrase, "Ever Grateful, Ever True." And I am truly Ever Grateful for the Stamps Scholarship and of my time here at Purdue. These past four years have provided countless opportunities for growth, development, and exploration. From undergraduate research on neurotrauma to numerous student organizations, I have had the opportunity to pursue my passion of improving the world through engineering and medicine.

Thanks to the Stamps and Trustees Scholarships, I have been able to study how medical devices are developed globally in Ireland, provide healthcare to underserved communities in Ecuador, and connect with other Stamps Scholars, all of whom are going to go on to do incredible things. An engineering degree may be all that many will see from my four years; however, the people, the friends, the family here in West Lafayette will stay with me forever. Hail Purdue.



IGNITING CURIOSITY: A STAMPS SYMPOSIUM



BY: SARAH RODENBECK, Conference Co-Chair

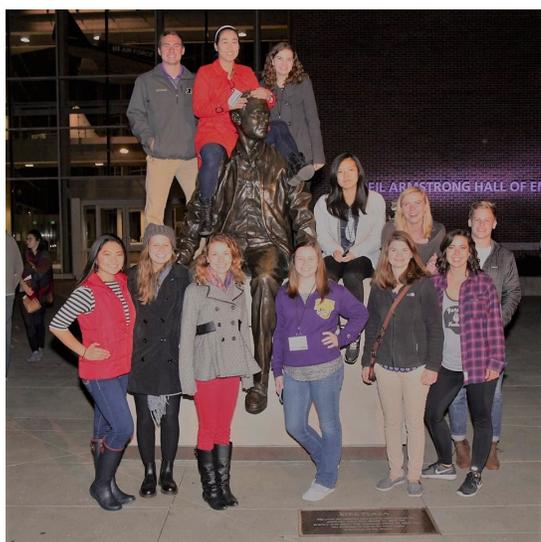


While Purdue's inaugural conference for Stamps Scholars, entitled "Igniting Curiosity: A Stamps Symposium", was held in October, initial preparations began in early 2016. After deciding to hold the conference, the planning committee, comprised of Purdue Stamps Advisor Catharine Patrone, Graduate Advisor Allison Murray, and student co-chairs Emma Alexander and Sarah Rodenbeck, began meeting regularly to discuss the trajectory and aims of the conference. Building from experiences and feedback from other conferences, we decided to focus on making the conference a medium for the exchange of ideas driven by the individual passions of participants and speakers. The intent of this was to en-

courage the synthesis of new ideas. To achieve these goals while also allowing scholars to build relationships with other participants we wanted to emphasize that all activities be interactive and interdisciplinary in nature. Therefore, we began reaching out to distinguished individuals in the Purdue faculty and alumni network in search of presenters. We quickly filled up all of the speaker spots and were amazed by the accolades and passion of the group.

Nearly 50 scholars attended, representing 10 universities. The largest contingencies came from Georgia Tech and, of course, Purdue. In addition, we had the pleasure of hosting Mr. Randy McDow, the Executive Director of the Stamps Family Charitable Foundation as well as Mr. Chaffee Viets and Dr. Mary Lynn Realff of the Stamps President's Scholars Program at Georgia Tech.

Scholars arrived Friday afternoon or evening and were welcomed with snack bags, Stamps Scholar t-shirts and notepads. Optional tours of campus and the Birck Nanotechnology center were offered for those who arrived earlier in the day. Formal activities began with a casual dinner following remarks by Randy McDow. To immerse scholars in some favorite Purdue traditions we then ventured to the Neil Armstrong statue to start a campus-wide photo scavenger



hunt, created by Purdue scholar Beau DeLaet (Construction Engineering and Management 2018). Scholars divided into four teams and had one hour to visit as many places on the list as possible. Some highlights of the scavenger hunt included doing a dry fountain run, taking a video of someone completing the moon jump, and a competition to see which team could take the most creative picture under the math sciences building. After an hour of exploring campus, everyone was happy to meet for milkshakes at Pappy's.

Saturday morning began with breakfast in Honors Hall then transitioned to two morning breakout sessions. Each time slot included four choices of interactive sessions, spanning many academic disciplines from "Science vs Pseudoscience" with entomology professor emeritus Dr. Alan York to "Rationality vs Real-



ty” with Dr. Kelly Blanchard of the economics department to “Living your Passion” by Timmy Global Health founder and Purdue alumnus Dr. Chuck Dietzen. Scholars then regrouped for lunch, featuring a keynote address from Purdue Honors College Dean, Dr. Rhonda Philips. Her message about finding happiness resonated with many scholars. Next, it was time for the afternoon experiential learning sessions.

These two hour long sessions allowed scholars to deepen their experience with an established passion/area of knowledge or explore a new interest.

Engineers and non-engineers alike chose to attend rollercoaster dynamics where they had the ability to design then “ride” the rollercoaster they built thanks to virtual reality technology.

Facilitated by Dr. Sharon McMullen, Design Garage, the next option, asked students to explore the interaction between art and science/engineering by thinking about the properties of plastic bags to design “inflatable art”.

Wilkommen, Bienvenue, and Welcome to Cabaret gave students an insight into the February 2017 Purdue production of the musical Cabaret. Participants had the opportunity to discuss the social and political climate of the setting of Cabaret and to have a conversation with the director. To conclude the session, the participants staged the opening song and dance from Cabaret with the help of Dr. Anne Fliotics of the Purdue Theater Department.

A spin-off of the 2016 Purdue Stamps Day of Service, the final option gave participants the opportunity to work with unmatched littles of Big Brothers Big Sisters Lafayette on fun leadership, collaboration, and communication activities.

After experiential learning, several students participated in a poster symposium featuring research they were involved in. This poster session featured the work of current Purdue Stamps as well as the work of Purdue Stamps Alumna, Alice Grasso, a Doctor of Optometry candidate at the Indiana University School of Optometry. Following a formal dinner, scholars split up into groups for evening activities, including bowling, walleyball, rock climbing, and giant scrabble. Sunday morning concluded the conference with a farewell breakfast including a preview of the April 2017 Stamps Scholars National Convention from Georgia Tech scholars.

The Stamps community is full of highly motivated and accomplished individuals and the group who attended Purdue’s conference was no exception. With activities ranging from formal intellectual discussions to playing sports together, perhaps the most valuable and lasting outcome of the conference was the connections formed among scholars.



STAMPS SUMMER SPOTLIGHT:

MOUNT VERNON LEADERSHIP FELLOWS

BY: CLAIRE LEE, Political Science and Economics 2018

One of my favorite experiences during my time at Purdue came to be because of a thoughtful email from Purdue Stamps advisor Catharine Patrone. During my sophomore year Catharine emailed me about the Mount Vernon Leadership Fellowship, a relatively new summer program aimed at rising college juniors with a passion for impacting their local communities. Looking into the program more I realized it was just what I was looking for, a fully paid opportunity to help my local community, spend a summer in Washington D.C. interacting with government, corporate, and military leaders, and grow in my own leadership ability. Thanks to Catharine's prodding, I was able to spend Summer 2016 in Washington D.C. with fifteen other leaders from universities across the country as a Mount Vernon Leadership Fellow.

Some of my friends at Purdue described my time as a Mount Vernon Leadership Fellow (MVLf) as a 'funternship' as we mixed our time working on personal causes and learning about leadership with excursions to the Supreme Court, White House, Pentagon, Capitol Hill, and with lectures from CEOs and five star generals. MVLf also granted me the opportunity to meet a personal hero of mine, Supreme Court Justice Sonia Sotomayor. As someone planning to attend law school after graduation and who has always dreamed of someday ending up on the Supreme Court, the opportunity to talk with a Supreme Court Justice, especially one who has championed change and challenged the status quo was incredible.



My time at Mount Vernon was more than just fun though as we were brought together to grow in leadership through biography, learning from the lessons of one of America's greatest leaders and presidents, George Washington. We actually had the opportunity to live on George Washington's estate during part of our time as Fellows, spending our nights reflecting as Washington once did on the piazza overlooking the Potomac. In addition each of us had a personal capstone to develop during our six weeks and mentor to help us. I worked on creating a leadership-sewing workshop for my local 4-H club. After seeing the decline in sewing participation during my time in 4-H, I set out to promote the benefits related to sewing and the leadership skills that can be gained through sewing projects. By working with my mentor from the National 4-H Council, I was able to leave Mount Vernon with curriculum and an action plan in place to implement when I got home.

I will always treasure my six weeks in Washington and the fifteen new friends I was able to gain through the Mount Vernon Leadership Fellowship. From breezy evenings on the piazza watching the sunset over the Potomac river to receiving advice from some of our nation's most prominent leaders, I had a one-of-a-kind summer.

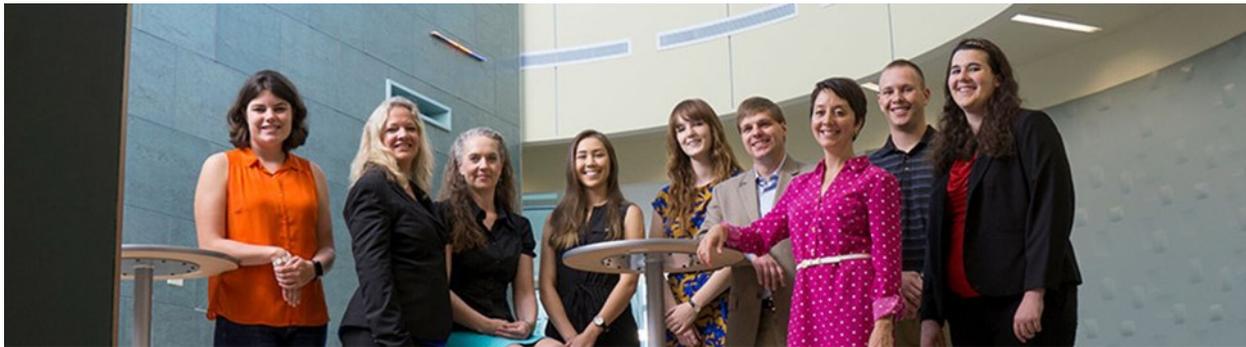


STUDENT INVOLVEMENT SPOTLIGHT:

POLICY RESEARCH INSTITUTE

BY: MIKAELA MEYER, Mathematical Statistics 2018 and 2017 Truman Scholar

When I finally enter the workforce, I hope to work for a statistical agency within the federal government. That's why I couldn't pass up the opportunity to be an undergraduate fellow at the Purdue Policy Research Institute (PPRI) this year. There are four other undergraduate fellows, and we all bring our skills together to work on projects that Dr. Weldon (Director of PPRI) and Dr. Spence (Postdoctoral Policy Fellow at PPRI) help us choose to complete. In the fall, we researched domestic drone policies and made a policy brief that gives our recommendations for ways in which the government can address our concerns. Currently, we are working on a project with Dr. Raymond from the Department of Political Science and the Global Sustainability Institute. We hope to put together another document by the end of the semester that examines and evaluates current state "net zero" energy policies. Also, we've had the opportunity to attend various conferences on campus and network with many people who are also completing policy-related research. These are unique opportunities that I would not have had without being an undergraduate fellow. Most of our research thus far has been qualitative, but I like working on qualitative projects because it's important to understand the limits and benefits of using either type of research approach. This interdisciplinary research experience has been incredible; it has fueled my desire to use statistics in a job in the public sector.



UNDERGRADUATE RESEARCH SPOTLIGHT:

ENVIRONMENTAL STATISTICS

BY: PETER BOYD, Applied Statistics, Actuarial Science, Math/Stat, Stat/Math 2017

During the summer after my sophomore year, I worked in Denali National Park and Preserve in Alaska. I was brought to the park to assist researchers with data analyses, primarily focusing on understanding factors that affect wildlife viewing opportunities. Tourists travel along the park road and access various areas through the bus system, allowing visitors to observe Denali's magnificent wildlife. My main assignment was to analyze various factors that affected the prevalence of these wildlife viewing opportunities, especially the role that traffic may play. After working in Denali, I returned to Purdue, and continued to answer my research question while under the guidance of a professor in Forestry and Natural Resources. Based on my results, I discovered that the animals in the park had become habituated to traffic in Denali, allowing for park officials to change policy dealing with vehicle restrictions. Through further analyses, I created models that predicted wildlife viewings of various species based on variables such as location and date. My analyses helped identify days, times, and areas in which wildlife is seen frequently while establishing a precedent for methodology and implementation of future statistical analyses.



I completed this research in the fall of 2016 as my undergraduate thesis. Through my work, I found my true passion within my academic discipline and hope to specialize on Environmental Statistics during my graduate studies.

THE YEAR IN REVIEW

ENRICHMENT FUND USE

Semester Study Abroads

- ◆ Madrid, Spain
- ◆ Zurich, Switzerland
- ◆ Lyngby, Denmark

Summer/Maymester Study Abroads

- ◆ Managerial Economics in Madrid, Toledo, and Segovia, Spain
- ◆ Aerospace Industry in Paris and Amsterdam



Spring Break Study Abroads

- ◆ Inventing Venice
- ◆ Technology, Innovation, and Culture in Bavaria, Germany
- ◆ Harry Potter Culture in London and Edinburgh
- ◆ Science, Invention, and Culture in Spain and Morocco
- ◆ Culture and Cuisine of Cuba
- ◆ Jazz Culture in New Orleans
- ◆ Cuisine and Culture of Europe in Belgium and Luxemburg
- ◆ Asian Emerging Markets and Economies in Taipei, Taiwan

Other Travel

- ◆ Film festival as part of a solar energy project
- ◆ Naval Academy Leadership Conference
- ◆ Medical Brigade in Quito, Ecuador
- ◆ Medical Service trip to Honduras
- ◆ IEEE Women in Engineering International Leadership Conference
- ◆ Jazz band trip to Portugal

STAMPS SCHOLARS NATIONAL DAY OF SERVICE

BY: SARAH RODENBECK, Computer Science 2019

Originally the idea of two Purdue Stamps Scholars, Emma Alexander and Claire Lee, the Stamps National Day of Service got its official start in April 2016. The idea was, in the words of Roe Stamps, to embrace the fact that true leaders have a “duty to use their skills and talents to help address the important issues where they live and work.” In its inaugural year, 18 Stamps partner schools participated in their respective communities.

Purdue Stamps Scholars embraced the idea that “Leadership is Contagious” and partnered with Lafayette Urban Ministry’s after school program. Over the course of two days, we worked with students to help them develop skills critical to becoming effective leaders. We targeted an age range of late elementary school to middle school. By the



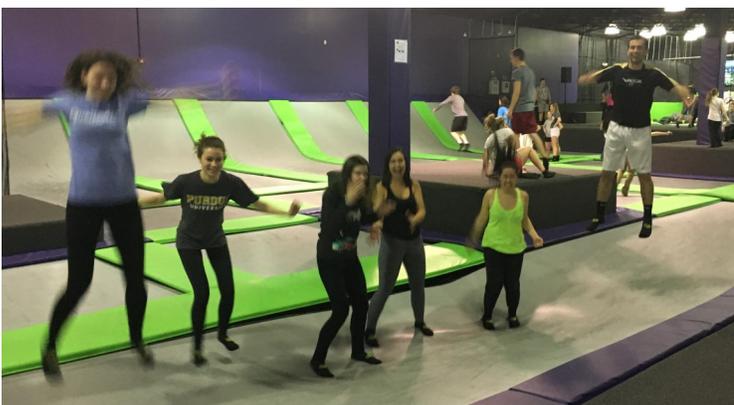
time students enter high school, they are often expected to have leadership skills, yet many have not learned about their personal leadership style and what it means to be a leader. Thus, this workshop aimed to teach students critical skills, like communication and collaboration, while helping them to become more confident in taking on leadership roles in the future. A few highlights of activities include a mock “Shark Tank” with teams of scholars and students and an activity where students had to verbally guide a blindfolded scholar through an obstacle course.

The 2017 day of service will take place near the end of April and will be a partnership with Cumberland Pointe Health Campus. Scholars will lead a variety of activities with the residents, with the goal being to not only cater to all ability levels but to also highlight the unique talents of our scholars. We plan to partner with the Beering Scholars at Purdue for the Day of Service.

STAMPS COMMUNITY at PURDUE

BY: MATT CUNNINGHAM, Electrical Engineering 2019

The Purdue Stamps community always make it a point to get together throughout the year to catch up and do something fun. This year, Catharine Patrone hosted a “Plates With Patrone” dinner every month, offering great food and a well-needed break from school. These were in addition to the annual first day of school dinner and the end of year cookout. The group also took a surprise trip to a trampoline park in March! Other highlights included the Thanksgiving Day dinner in the dining court, which is always a group favorite, and the Dead Week Buddies Christmas party. We also had the first ever Stamps Walleyball team which finished the season with an impressive 0-4 record (though everyone still had a lot of fun!).



2016-2017 Stamps Scholars



Not pictured: Matt Cunningham and Michael Wadas

Photos: Page 1: Stamps Executive Board (Left to right: Sarah Rodenbeck, Matt Cunningham, Claire Lee); Page 2: Peter Boyd, Emily Grimm; Page 3: Katherine Lin, Theresa Saenz; Page 4: Daniel Shyu, Michael Wadas; Page 5: University of Mississippi scholar Eloise Tyner experiences the thrill of a virtual rollercoaster, Georgia Tech scholar Tess Powers with her design (inflatable DNA) from Design Garage, a group of scholars pose with Neil during the scavenger hunt; Page 6: Several scholars played giant scrabble made by Erica Colarusso, Participants performing the song “Wilkommen” from Cabaret, all scholars who attended the conference; Page 7: Claire Lee at the Supreme Court, White House, with other MVLF students, and at the Gallop Organization; Page 8: Mikaela Meyer (far left) with other members of the Policy Research Institute, Moose in Denali National Park (picture by Peter Boyd); Page 9: Barbara McNulty in Brugge, Belgium, Nick Morales at Glastonbury Tor, England, Sarah Rodenbeck in Consuegra, Spain, Savannah Woods in Bavaria, Germany; Page 10: Emily Grimm and Beau DeLaet with a student at LUM after “Stamps Shark Tank”, Graduate Advisor Allison Murray, Scholars Beau DeLeat and Sam Albert, and LUM students participating in a collaboration activity; Page 11: Scholars at Get Air Indoor Trampoline Park, Dead week buddies/Stamps Christmas party

Brochure Design by Sarah Rodenbeck