

**OFFICE OF UNDERGRADUATE RESEARCH**  
**NORTHWESTERN UNIVERSITY**  
**2017-18 ANNUAL REPORT**



**FOR: DR. MIRIAM SHERIN, ASSOCIATE PROVOST FOR UNDERGRADUATE  
EDUCATION AND  
THE OFFICE OF UNDERGRADUATE RESEARCH ADVISORY COUNCIL**

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## OVERVIEW:

**“While classes offer ample opportunity to learn things in theory, undergraduate research projects enable students to apply these skills in a real world setting, taking on greater personal responsibility.”**

The Office of Undergraduate Research awarded funding to 563 students in 2017-18; a majority of these students were engaged in independent research and creative projects where they learned project management skills that will support their post-college aspirations. Students learned how to explore a topic of significant interest in-depth: first, they learned to collect and interpret scholarly literature to frame a rationale around their research question, supported by expertise from faculty experts (inside and outside the university) to determine what gaps in their field of study needed to be filled. Next, they learned how to develop a project and methodology that could potentially fill that gap, wrestling with the real world limitations of time and their current skill level. They learned how to write a competitive grant proposal (ultimately reviewed by multiple faculty across a range of disciplines) with iterative revisions based on feedback from faculty sponsors and OUR advisors. Once awarded, students learned that life rarely goes according to plan, even if the plan was meticulously constructed with expert advice. Consequently, they adjusted and revised their projects, learned to be creative and determined, and showed grit and imaginative resourcefulness. Finally, they learned to analyze and draw conclusions from their results and relevant findings. Many students rendered what they learned into papers and presentations to share their new knowledge with the broader world, whatever that may be.

We hope that in the process they discover magnificent things, but we know that the true value is in the experience itself. Confident in the process of knowledge acquisition, curated by thinking in terms of questions and *how* to answer them (instead of existing answers), students are now more prepared for the life ahead of them, whether that be graduate school, industry, non-profit work, creative artistry, or entrepreneurship. It is this process that makes undergraduate research such a high impact practice, and it is our emphasis on helping students to gain this experience that makes Northwestern an innovative and leading voice in this field.

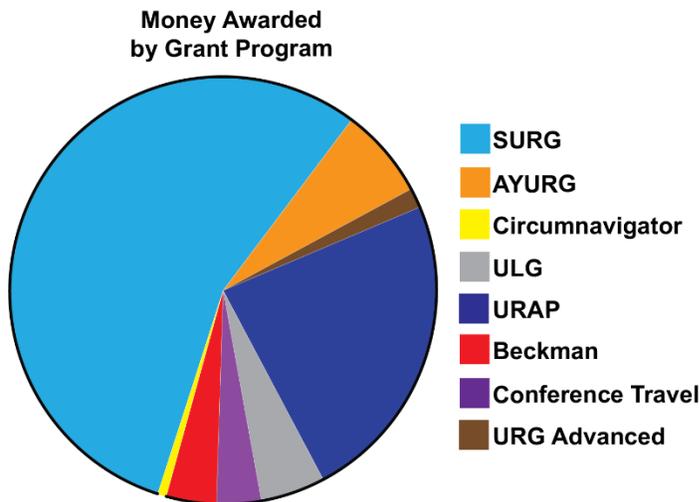
**“[Research] allows you to become the owner of your intellect.”**

Developing an approach to undergraduate research at Northwestern (and the formation of the Office of Undergraduate Research) centered on leveraging institutional strengths and using these to template new solutions in areas of need. Northwestern has a long tradition of supporting student research in research groups/lab environments; within these settings, there is a supporting infrastructure to help students learn and develop. Students gain skills through the mentorship of faculty and graduate students, from conducting literature reviews to writing up results. However, outside of these environs, there was no clear path for students to engage in research. OUR was created to build a parallel infrastructure of support in non-research group/lab environments, seeking to enable and encourage students in all fields to pursue research. Northwestern is now a leader in supporting and funding students in non-research group/lab disciplines, and the results of this high impact practice on these students' lives is tremendous.

The bedrock of all OUR programs is faculty review. At Northwestern, faculty review committees are empowered to make decisions based upon the merits of the student's proposal. Applying rigorous standards as defined by the field of the student's project, Northwestern works to ensure that all students with outstanding and qualified projects receive funding. This report will highlight the efforts of the Office of Undergraduate Research in 2017-18. The embedded quotes are all from anonymous student feedback surveys of OUR programs, as we feel students tell their own story better than we can.

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**\$1,386,402**

*Awarded to Undergraduate Student Researchers in 2017-2018  
563 awards given across all programs*

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## OUTREACH:

**“Research forces one to not just learn a subject but get inside it. It is the young undergraduate's first real trial at becoming an expert.”**

Part of the core mission of the Office of Undergraduate Research is to promote and explain the opportunities found by getting involved in research/creative experiences to students. There are times where this outreach work directly leads to students applying to OUR programs; however, we view our mission more broadly than to simply generate interest in our own programs. Our goal is to be the vanguard of information for students about what undergraduate research is/looks like and what the early steps are to get involved.

To make progress in achieving this goal, we work in intentional collaboration with other units who also support undergraduate research, so we can be in a position to promote the broadest expanse of opportunities (not simply our own). To that effect, we held 197 collaborative meetings in 2017-18 with leaders of different undergraduate research initiatives, seeking to build a comprehensive understanding of where opportunities lie and how students can access them. These meetings are with administrative leaders at all of the undergraduate schools, other units such as the Office of Fellowships and the Buffett Institute for Global Studies, individual faculty and labs engaged in supporting undergraduates, among many others.

Our Outreach Coordinator works with faculty, departments, and student groups to hold information sessions around undergraduate research opportunities. In 2017-18, Tori Larsen arranged nearly 300 information sessions, nearly half of which she led herself. We work in collaboration with different leaders to identify appropriate classes and events for presentation. For example, after meeting with Medill advisors, we learned that first/second year students were a better target demographic in this school. We were invited to speak at the required advising meetings for each cohort. Those two info sessions led to a more than doubling in Medill applications and awards to the Summer URG program. We coordinate dedicated outreach to Quest Scholars and Posner Fellows; we are in the middle of assembling a report assessing Posner Fellows' continued engagement in research related activities. Preliminary results from the summer 2017 class of fellows demonstrate that 12 of 26 applied for research-related funding in the 2017-18 academic year. Of these, 9 were successfully funded (SURG, WCAS/Neuroscience Summer Grants, Conference Travel grants, etc), with one student winning multiple awards. We aim to continue collaborating with these programs as a pipeline into OUR programs.

Tori also partners with Residential Life to hold sessions in residential settings to help make attendance easy and meet the students where they are. Assistant Director Megan Wood runs our Peer Mentor Program, wherein previous grant winners support and encourage current grant winners. In addition to this important work, Megan has these Peer Mentors involved in our outreach efforts, regularly inviting them to speak to students at information sessions and panels.

OUR outreach is not limited to information sessions and meetings. We maintain a comprehensive [website](#) devoted to helping students learn how to get starting in pursuing research. In addition to specific information for students applying to all OUR programs, the site houses how-to guides and explains the process of how research works across different fields. Of particular highlight are two sections: “Getting Started” and “Advising” provide significant resources regardless of the students' relationship to OUR's programs. The site also provides a quick sign-up link to our weekly e-newsletter. OUR Administrator Bryce O'Tierney oversees the newsletter which reaches 2,500+ people every week (+383 subscribers in last year, average of 869 people open our newsletter each week); we offer all of our

## OUTREACH:

collaborators the ability to post their opportunities to the newsletter, to make it a broader, more effective means of reaching students.

There are two other key components of OUR outreach. One, Director of OUR Peter Civetta remains the lead administrator of the [Global and Research Opportunities](#) (GRO) database. The site, a collaboration between OUR, the Office of the Provost, and NUIT based off of an earlier system built for the Buffett Institute, contains opportunities for undergraduates, faculty, graduate students, and administrators including grants/fellowships, research group/lab opportunities, leadership and community based opportunities, global opportunities and exchanges, and much more. The site is a particular success with undergraduate students as nearly 75% of the traffic to GRO originates from the OUR site. Two, Peter Civetta helped to get a grant from the Arthur Vining Davis Foundations to build video series to help students getting involved in undergraduate research. The videos are housed on the [OUR YouTube](#) page, and it has four different types of videos: general videos about the hows and whys of research based upon student testimonials, program videos, faculty interview videos designed to teach students how research works in humanities, arts, and social science fields, and *The Adventures of Grant Man*, a seven episode comic web series designed to teach students the basic of getting started. More detail on GRO and our YouTube page can be found further into this report. We see these resources as a crucial part of our outreach plan.

**“I feel much more motivated and invested in my classes. Prior to this experience I was feeling worn out by learning in a classroom setting. Doing research reminded me how much I love learning, but that I need to be more creative about the ways I do that learning at NU.”**

## 2018-19 GOALS

Our primary outreach goal for 2018-19 remains consistent across the past few years: to work towards making sure every undergraduate is aware of the opportunities presented by undergraduate research. It is not our goal to necessarily have full participation in our programs, as students follow many different paths to achieve their goals; however, we want them to at least understand that it is an option and an awareness of what they could do to learn more.

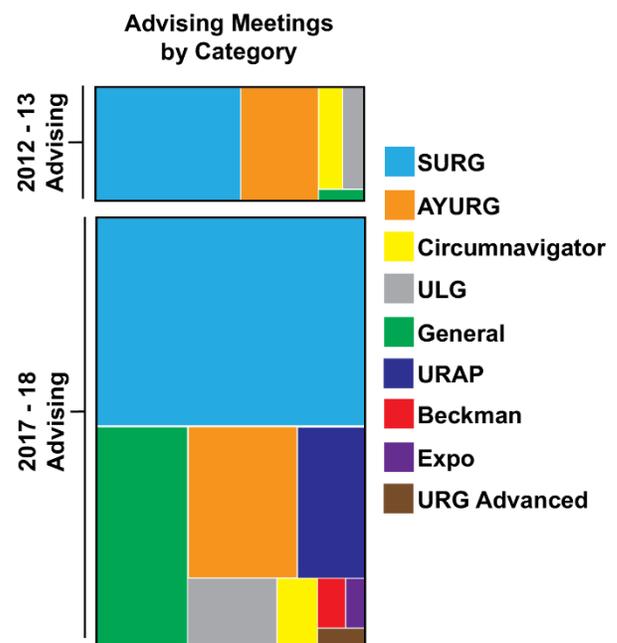
To that end, we created the Outreach Coordinator position five years ago, and it was made a full time (10 month) position three years ago. Through the successive one year appointments of recent graduates, we are building resources and networks to reach more and more students. Our Outreach Coordinators have come from a variety of backgrounds enabling us to tap into the thinking and experiences of different types of students. For 2018-19, we have a unique opportunity, as we invited Tori Larsen to renew for a second year. In this way, we will have more capacity to build critical infrastructure, as she will not have to spend the fall getting acclimated and trained. In particular, we are looking to build deeper connections with student groups, as we understand them to a key part of student identity on campus. We hope to focus more outreach efforts through student groups, while maintaining our current involvement with classes, departments, and other units. Tori's return will allow for significant growth in our outreach infrastructure, seeking to intentionally build a sustainable and potentially scalable model for future Outreach Coordinators to follow.

## ADVISING:

**“I feel that I have the ability to understand the process by making bold choices without having to worry about making mistakes. This is mainly because of the support group that the Undergraduate Research Office provided. If it was not for the office, I would not make the decision to travel abroad to find out more about the research topic.”**

In 2017-18, OUR advising staff operated nearly at capacity, with a cumulative 2,378 meetings (3.76x more meetings than the first year of the office in 2012-13, which had 631). While advising has always been central to undergraduate research at Northwestern, the breadth and focus has shifted over time. When Peter Civetta was first hired in 2009-2010, advising was only offered for students applying to the Undergraduate Research Grant programs. By the time OUR was formed in 2012-13, advising was opened up to students applying to all programs and later to faculty applying to the newly established Undergraduate Research Assistant Program (URAP). Still, 83% of all advising appointments were connected to the URG program (see top box).

While we know that students need support in learning how to develop an independent URG project, the advent of the research assistant program revealed significant student need around getting started in research. In particular, students needed help in finding a research group/lab and/or locating faculty members with whom they would want to collaborate with on their research agendas. The office began offering and promoting advising for students looking for more entry-level information, and we discovered a huge, unmet demand. In 2017-18, advisors held 625 of these types of meetings, a number that is almost equal to the total number of advising appointments in 2012-13 (631, in green to right). In six years, the number of getting started-type advising appointments grew from 12 to 625, and we do not feel that we are meeting the overall demand (see lower box for overall advising meeting breakdown by category).



Even with the expansion of staff from two full time advisors and an intern in 2012-13 to three and a half advisors now, we realize that we cannot meet the needs in these areas through individual advising alone. Therefore, this year we focused on piloting scalable options to help us reach more students. Evangeline Su, in consultation with the full OUR staff, developed a one-hour Finding a Lab workshop. We decided that these workshops would be offered throughout the academic year, and not just in advance of the Summer URG cycle where most previous advising on this topic had been centered. We offered 4-5 per quarter, and again we discovered significant unmet need. Tori Larsen, in consultation with the full OUR staff, developed a partner one-hour Finding a Faculty workshop that focuses more on students who are not in research group/lab disciplines; we anticipate running the workshops, (alternating weeks with Finding a Lab) over the entire academic year. In addition, Evangeline Su and Peter Civetta are working to further develop the Science Research Workshops and Arts, Humanities, Social Science Research Workshops respectively to make these important programs

## ADVISING:

more scalable. Currently, they support between 10-25 students each over 8 weeks of winter quarter, and we are exploring ways of using them to reach more students.

These scalability efforts are tied to vast growth of individual advising. The over 1,100 individual advising appointments for Summer URGs in 2017-18 represents the core staff advisors meeting with 10-12 students every day (most with grant proposals needing review) for weeks leading up to the grant deadline. In other words, we are close to maxed out in terms of the amount of individual advising possible with current staffing; however, the advising-intensive model is working well for participating students, and it is a model that we want to continue, while further exploring comparable, scalable models.

URAP is, in part, utilized as a pipeline to help students engage in their own projects, and through dedicated outreach and advising by Megan Wood, the fruits of this pipeline are being realized. This last year 30 URAP alumni successfully applied for AYURGs (11) or SURGs (19). In addition, advising is particularly meaningful for students with low socio-economic status, first generation college students, and/or underrepresented minority students.

Assessment of advising remains very positive. With Summer URGs, successful students who used advisors increased by 10% compared to the previous year, and there was a 54% increase in overall advising meetings. 64% of all Summer URG winners used advising; this number swells to 84% of arts, humanities, and performance students, who need more support to create their first independent project. 75% of all social science and journalism student winners used OUR advising. Only 53% of science and engineering winners utilized advising, which we understand as a reflection of the infrastructure of support that students can receive in a research group/lab setting. From a qualitative perspective, feedback from students at the time of their application (before they have learned results) remains extremely high. In a post-application survey, students were asked to rate their experience with different elements of the application process: one such area is URG advising. 69.2% of all applicants (256 students) rated their experience Excellent or Very Good; only .5% of all applicants (2 students) rated their experience as Inadequate. In addition, to show the impact of our outreach encouraging advising, only 17.8% of all applicants (66 students) listed Non-Applicable to this question. By way of comparison, students were also asked to rate their experience with their faculty sponsor; 47 students combined rated their faculty Good, Adequate, or Inadequate, and 48 students rated their URG Advisor as Good, Adequate, or Inadequate. Some specific comments students offered around their advising experience include: "I received a strong amount of individualized attention and specific feedback on my proposal." "The people at the Office of Undergraduate Research gave great feedback and always made themselves accessible. They were a great help." "Advisors were very knowledgeable and made writing this grant proposal so much more manageable."

Finally, in 2017-18, we further developed the training that advisors receive in preparation to work one-on-one with students. Our process has consisted of three parts: 1) new advisors review all OUR advising materials to get acclimated to the approach and language used; 2) new advisors review previous grant applications noting feedback and decisions by the grant committee; and 3) new advisors work closely with existing advisors. Trainees will watch advisors as they handled different types of student appointments, and then they will engage in conversations around language and approach. Once they begin to feel comfortable, the trainee will begin to lead the meetings with the trained advisor present; review and feedback are offered immediately afterwards until both parties feel comfortable

## ADVISING:

and confident enough to handle students on their own. This one-on-one training happens with all trained advisors; for example, when Tori Larsen started, she not only shadowed Peter Civetta's advising appointments but also Megan Wood's. OUR focuses on empowering advisors to establish their own identity/voice to ensure the greatest degree of authenticity possible, so they are trained by multiple people.

From a previous work environment, Tori Larsen introduced us to "journal club," where we select proposals to all review as a staff, then we meet to discuss. This process not only accelerated her training, but it also had two additional benefits. First, it created a forum where all advisors could discuss how to approach different types of projects, ensuring that there is more consistency across advisors. Second, it provided a forum for us to explore unfamiliar areas/projects, so we can discuss and determine approaches that we want to take with them. For example, we are working with more students in computer science, and their projects are often different than other science/engineering proposals. Journal club allowed us to discuss ways of better reaching and supporting these students. Journal club will now be added as a core part of ongoing advisor training.

**"Advisors were great help in the application process! I really appreciated their constructive feedback and their willingness to sit down with me and go through my proposal."**

## 2018-19 GOALS

For the first time, there will be no changes to the advisor staff. Without the extensive time needed to train new advisors, we plan to focus on broadening and deepening each advisor's ability to handle students effectively. While all advisors are trained to handle all students, we have generally steered students towards the advisor with specific area knowledge. For example, Peter Civetta is the primary advisor for URG projects in the arts and humanities given his background. Through journal club, we will leverage each advisor's strengths and use to continue the training of the other advisors; in this way, we hope to broaden the areas of expertise that we can cover effectively.

Sample grant proposals are the most frequently utilized resources on our web site. This year we plan to revamp and revise these important offerings by annotating the selected proposals. These annotations will highlight areas of strength and weakness within each proposal to enable us to further explain the expectations of the grant committee and proposal writing more generally. We aim to have the new set of proposals up on the web site before the end of fall quarter.

Finally, while noting the effectiveness of individual advising, we will work to create more scalable models of advising that can help us meet rising student demand, given that we have probably maxed out the amount of advising appointments are possible with the current size of the staff. As mentioned previously, this work includes the Finding a Lab/Faculty workshops and the research workshops series.

## OUR OVERALL PROGRAM REVIEW:

**“I think having this experience as an undergraduate has made me more confident in relying on myself and trusting myself. I find that after doing this, I know more about myself as a student, artist, and person.”**

In 2012-13, at the advent of the Office of Undergraduate Research, we began to fully implement the plan to increase student involvement through improved outreach, especially in non-research group/lab fields, and dedicated advising. This work went hand-in-glove with efforts to develop faculty review committees designed to apply rigorous, disciplinary standards to every applicant. The goals were threefold: 1) Increase participation from students in the arts, humanities, and non-research group social sciences through creating a parallel infrastructure to what research group/lab students received; 2) Increase participation from first and second year students through outreach to their classes and groups and providing advising to help them get started; and 3) Increase participation across the board for all students in all schools, including NU-Q and SPS.

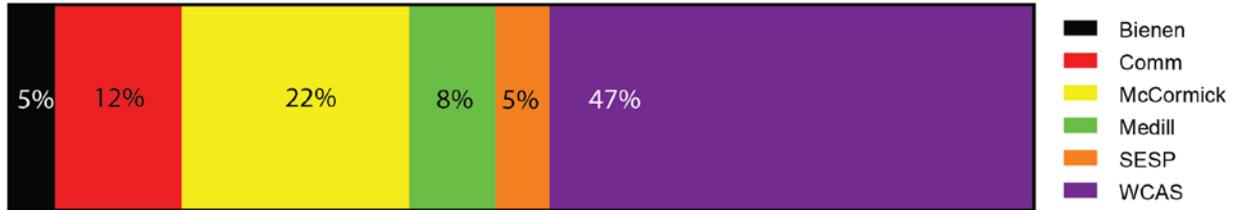
In the intervening six years, awarded students across all OUR programs have increased more than 216%. More than \$100,000 has been awarded for two consecutive years for independent creative arts projects, such as Bienen jazz performance and Communications dance students collaborating to explore the role of improvisation between their arts forms in a new production of Duke Ellington’s *Nutcracker Suite*. The Undergraduate Research Assistant Program has grown from supporting 35 students to learn in mentored environments on faculty projects to 145 students, heavily weighted in support of first/second year students in the arts and humanities. Conference Travel Grants, given to support students presenting at conference events in their fields, have more than tripled, rising from 28 to 92. Undergraduate Research Grants, across the academic year and summer programs, have grown from supporting 183 students in 2012-13 to supporting 311 students this year.

In our efforts to bring more parity between research group/lab and non-research group/lab students, there has been no statistical difference between the success rate of those students within the Academic Year URG program (inclusive of revisions) for six consecutive years (using Fischer’s Exact Test). There has been no statistical difference in Summer URGs for the past five consecutive years (using the same statistical test). During that same time period, non-research group project awards have doubled, increasing by 100%. Research group/lab projects have also continued to grow, as intended, but at a more moderate 53% rate.

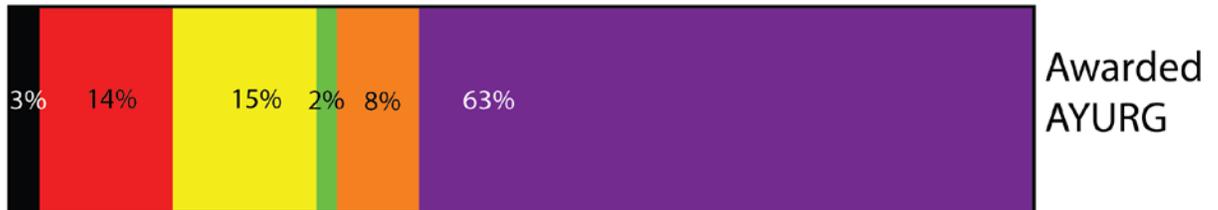
These efforts also involved trying to get more students involved from the smaller schools. The following graph shows participation compared with school population, and it indicates significant growth. This past summer Peter and Megan met with representatives of all the schools to review their specific school data, to discuss goals for their students’ participation, and to make plans to actualize those goals, i.e. identifying specific courses, faculty, or groups to target in our outreach efforts.

OUR OVERALL PROGRAM REVIEW:

### Undergraduate Research Projects by School % Representation

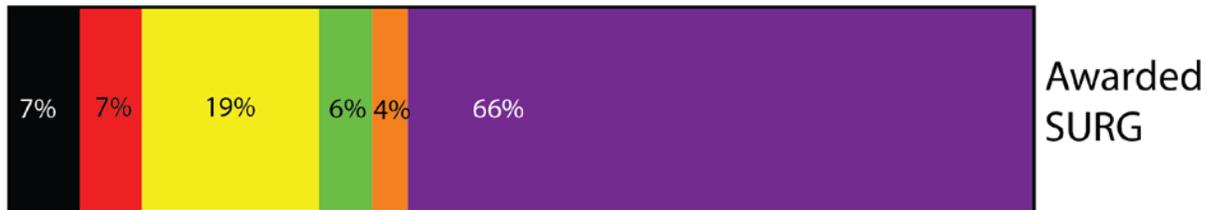


Total = 8171 Enrolled Fall 2017



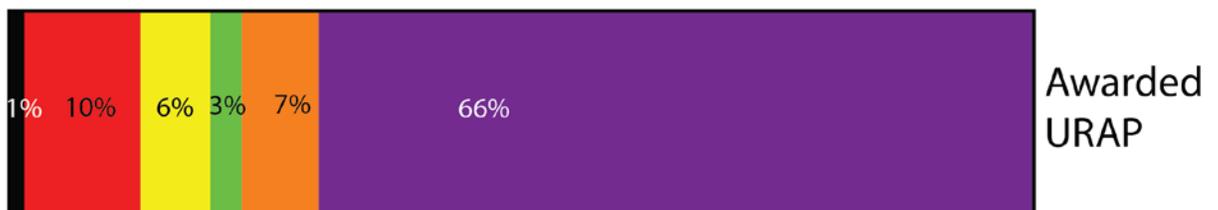
Total = 100\*

Awarded  
AYURG



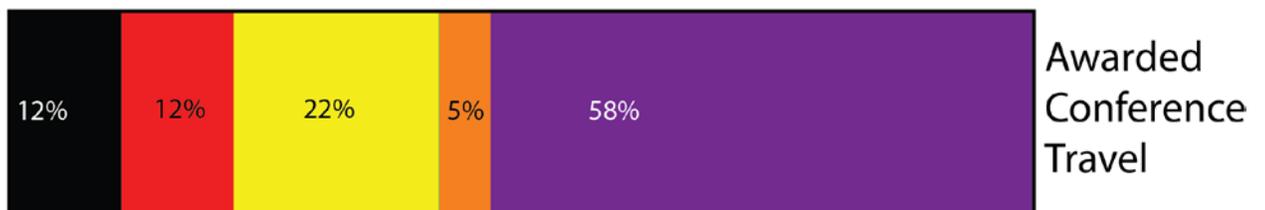
Total = 231\*

Awarded  
SURG



Total = 132\*

Awarded  
URAP



Total = 100\*

Awarded  
Conference  
Travel

\* some awards may be counted twice if students indicated enrollment in two schools

## INDIVIDUAL PROGRAM REVIEW:

### UNDERGRADUATE RESEARCH GRANTS (Academic Year, Summer, and Advanced):

**“I think that I learned more in these three months than in the past three years. I've never felt more independent and more capable.”**

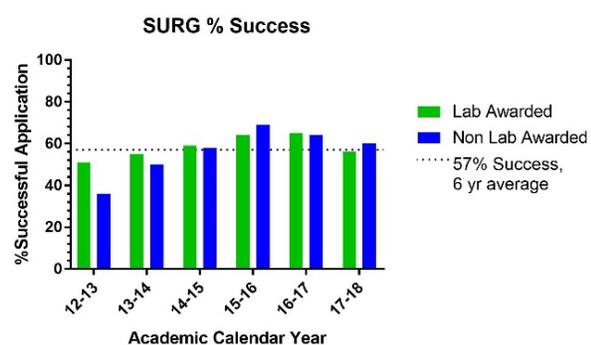
Our flagship URG programs experienced another record year. Combined between all programs, we had a record 523 applications, of which 311 were awarded funding. This year saw the introduction of the new URG-Advanced program, which offered students who had already received the grant to apply for additional funding. If awarded, the funding costs were shared 50-50 between the student's school and OUR. 3 out of 4 students were funded with AY URG-Advanced grants, and 4 out of 7 students were funded with Summer URG-Advanced grants. Awarded students came from Communications (3), WCAS (2), and McCormick (2); only Bienen declined to participate in the program.

A hallmark of the AY URG program is the ability of the faculty review committee to offer substantial feedback to the student and invite them to resubmit to a future deadline. This pedagogically-oriented process empowers the student to learn more about their project and the requirements for successful grant writing, while providing additional opportunities for funding. Overall, the program had 148 total applications and made 96 awards; here is the breakdown according to resubmissions:

- 126 single student applications: 77 awards (61% success rate)
  - 20 students resubmitted: 16 awards (80% success rate)
  - 2 students resubmitted twice: 2 awards (100% success rate)
- \*Students who take advantage of the resubmission process have a combined 82% success rate.

The Summer URG program reached new record highs in applications and awards this year, even with a reduction in overall acceptance rate. The faculty felt strongly about the slate of approved students and about the prospects for this grant to significantly impact the students' academic experience at Northwestern. Other highlights include:

- Efforts to encourage greater participation in arts, humanities, and other non-research group fields and to support their process of learning to create projects/applications have been successful, as seen by this graph.
- 19 of 28 (68%) of URAP to URG applications (students moving from being research assistants to their own projects) were successful- significantly out-performing the general population.
- 274 faculty members served as application sponsors, an increase of 56 over the previous year.
- 34 faculty review committee members completed over 1,100 reviews totaling over 450 hours of work over the winter final exam period, spring break, and the first week of spring classes.
- Five out of eight undergraduate schools had record high numbers of applications (only SPS and Comm saw a decrease). Here are the percentage increases over last year for the top performing schools: SESP +150%, Medill +122%, Bienen +67%, McCormick +59%, and WCAS +28%. Many also had success rates that out-performed the general population.



## INDIVIDUAL PROGRAM REVIEW:

- 6 of 11 (54%) members of the Science Research Workshops (SRW) were successful- a very strong showing considering the cohort was mostly first-year students and not involved in a research group/lab at the time the program started in January. 5 of 7 (71%) members of the Arts, Humanities, and Social Science Workshop program were successful.

## UNDERGRADUATE RESEARCH ASSISTANT PROGRAM:

**“The URAP program has provided us with the opportunity to advance an important and unfunded aspect of research. The progress we made this summer will pay dividends for our planned future research and specifically grant proposals.” – Faculty Mentor**

Our introductory program, the Undergraduate Research Assistant Program, provides an apprenticeship-style opportunity *for students new to research* wherein the faculty apply and select a student to work with. The URAP program *is intentionally skewed towards non-research group/lab disciplines* and is one mechanism to create a parallel infrastructure and clear point of entry for students in humanities/non-research group fields. This year we introduced a new application, which focuses on the faculty sponsor’s mentorship plan and research skill acquisition for the students. Furthermore, students are now required to provide both a resume and cover letter upon application. This requirement for students is two-fold: 1) to align the application process with other internships/jobs, so that students see research as developing transferable skills and gain an earlier awareness of Career Advancement resources; and 2) to provide the faculty mentor a better means to evaluate student interest and experience before hiring a candidate.

Combined, the Academic and Summer URAP faculty review committee awarded 119 of 166 faculty applications (72% awarded), which barely scraped the surface of student need given there were only 147 students hired relative to the 692 applications received (21% success rate overall). 61% of these awards were given to non-research group/lab opportunities. Of note, faculty mentors can apply jointly with a specific student(s) (78/117 students hired, 67% success rate), or a run a job search (53/556 students hired, 9.5% success rate). Faculty who ran a job search had an average of 15 candidates apply to their position. Mentor/mentee pairs from a previous grant cycle had the option of submitting a second grant, if the student was not yet ready for independent research. Continuing URAPs are only funded if the application demonstrates that the student will learn new and different skills that advance their understanding from the prior URAP. 16/19 continuing applications (84%) were awarded.

This program serves an important role as a pipeline program to help students learn what research looks like in their field. Megan Wood’s targeted outreach to mentor/mentee pairs yielded fruitful results for students moving forward into

Faculty Applications		Awarded	Rejected	Total Apps	Success Rate
Academic Year	Lab	19	10	29	66%
	Non Lab	43	19	62	69%
	Totals	62	29	91	68%
Summer	Lab	27	8	35	77%
	Non Lab	30	10	40	75%
	Totals	57	18	75	76%
Annual Totals		119	47	166	72%

independent research. This year 28 URAP alumni applied for summer URGs: 19 were funded through SURG, 4 were funded through Weinberg or McCormick grants, 1 ultimately pursued a continuing URAP,

## INDIVIDUAL PROGRAM REVIEW:

and only 4 were not funded at all. 25/28 successfully funded independent projects (86% success rate) is significantly higher than the general population. Lastly, we strongly believe that the focus around intentional mentorship and professional development benefits both faculty mentors and students. Below is a sample of feedback from faculty this last AYURAP grant cycle alone:

**“We completed one important aim of a project, which generated three abstracts, two presentations at national conferences, and a manuscript in preparation”**

**“I was able to do some sub-analysis on a project providing me with an additional manuscript (with the student as co-author)”**

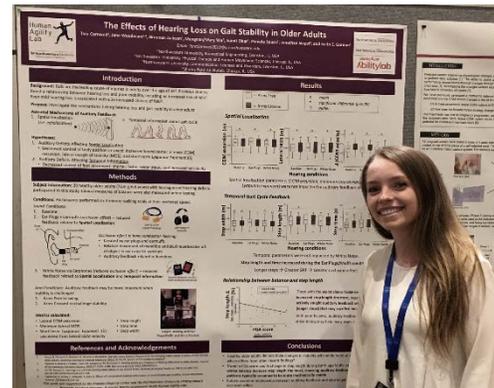
**“URAP was VITAL! First, money is always hard to find and early support from URAP allowed me to not only receive in-kind support, it allowed me to find future collaborators. My most recent film project *Rogers Park* was supported by two URAPs, and the film went onto critical rave reviews, including both a New York and Los Angeles Times critics pick”**

## CONFERENCE TRAVEL GRANT PROGRAM:

**“Attending my first conference literally changed my career trajectory.”**

The Conference Travel Grant program provides 50% of expenses (up to \$500) for students selected to present at an academic conference or similar event. A few years ago, we adjusted the promotion on this program to focus on faculty who are aware of conference opportunities (as opposed to students), and it is now one of our fastest growing programs. In 2017-18, we awarded a record 92 grants, an increase of over 325% since the opening of OUR in 2012-13. Some highlights include:

- Two students (Gabriel Caniglia and Megan Imundo) received two grants each to present at two different conferences.
- Tara Cornwell, a URAP and SURG awardee, received the American Society of Biomechanics Annual Meeting’s inaugural Undergraduate Research Award for her poster titled “The Effects of Hearing Loss on Gait Stability in Older Adults.” This was Tara’s first participation in a national-level meeting.
- Six students presented individually at the American Alliance for Theatre and Education; five students presented individually at the American Institute for Chemical Engineers; five students presented individually at the Association for Psychological Science – indicating the broad use of the grants across fields.
- The grants can be used by students in creative fields where there is a rigorous selection process similar to the selection for an academic conference, allowing us to fund students to



*Tara Cornwell (McCormick '19) with her winning poster at the American Society of Biomechanics Meeting*

## INDIVIDUAL PROGRAM REVIEW:

present their work at the Tanglewood Music Center, the World Saxophone Congress, and the Bentonville Film Festival among others.

**“I feel that presenting my research at a conference as an undergraduate is a valuable experience in developing my communication and presentation skills specifically in the research context. I am also able to make a more informed decision about my career goals and to more concretely show that I am capable and serious about research.”**

## CIRCUMNAVIGATORS TRAVEL-STUDY GRANT PROGRAM:

Given in conjunction with the external Circumnavigators Club Foundation, this grant provide one student a year with the opportunity to travel around the world during the summer after their junior year. Candidates are vetted by a Northwestern review committee that selects three finalists; this finalists are interviewed by member of the Circumnavigators Club, who selects the winner. This year’s winner was Hannah Whitehouse, a dual degree student in the Bienen School of Music (music education) and the School of Education and Social Policy



(social policy). She is the first winner from Bienen (and the third from SESP). Whitehouse studied El Sistema, a rigorous model of music education that originated in Venezuela in the 1970s and has since spread across the globe to provide education to low-income children through hundreds of free programs. She traveled to England, Kenya, India, the Philippines, and New Zealand. A blog of her experience can be found here: <http://blog.undergradresearch.northwestern.edu/blog/hannahw/>.

**“This past week in Greece has been quite the adventure. Honestly, it’s been the exact same kind of adventure I’d hoped for ten months ago when I began applying for this grant. One full of sweat, sunburned skin and some sleepless nights, but also full of profound personal development, intellectual growth and new friendships.”**

## INDIVIDUAL PROGRAM REVIEW:

### UNDERGRADUATE LANGUAGE GRANT PROGRAM:

This program funds intensive language study over the summer (75% of expenses up to \$5000). In the application, students make the case for why they need to study the language to achieve a future academic or professional goal, why they have to study it intensively over the summer, and why the program they have chosen is appropriate for their needs. ULGs can be awarded for any language and any level of language study, and the student does not need to go abroad. ULG students work extensively with advisors on their applications; 24 of 27 NU-Evanston (89%) and 4 of 6 NU-Qatar (67%) students worked with an advisor. This year, the number of faculty reviews per application increased from 3 to 4 in order to help ascertain consistency amongst reviewers and create a greater spread in scoring in order to identify the best applications.

The need for grants to conduct language study is high, as the costs can be prohibitively expensive. In the post-program feedback survey, the average student reported cost of program tuition/fees was \$4,862, while average total expenses reported were \$7,120. 92% of ULG recipients indicated that it was unlikely or very unlikely that they would have participated in intensive language program without support of this grant.

Applications: 33

Awards: 14 (4 from NUQ, which does not offer on campus language courses)

3 first years, 6 sophomores, 5 juniors

8 Weinberg, 1 McCormick, 1 Communications, 4 NUQ

Languages: 4 French, 2 Arabic, 3 Spanish, 2 Germany, 1 Russian, 1 Japanese, 1 Chinese



*Kevin Zhang (WCAS '19) during his studies at Princeton in Beijing*

**“In the duration of eight weeks, I feel my Chinese level has improved more than the three years of Chinese I have studied at Northwestern. During classes, in particular, Princeton in Beijing stressed speaking and listening skills... Regarding daily homework, our reading and writing materials introduced me to formal Chinese, which contains a completely different set of Chinese characters that I have never understood before PiB.”**

## INDIVIDUAL PROGRAM REVIEW:

### UNDERGRADUATE RESEARCH AND ARTS EXPOSITION:

**“Undergraduate students rarely get to present their work outside of class. Through this expo, I hope my work reaches a wider audience, and I get feedback from experts.”**

The goals of the Undergraduate Research and Arts Exposition are three fold: 1) To provide students with the opportunity to share their work with a broader audience. Presenters are not limited to those students funded by OUR; instead, we encourage all students to apply and present. 2) To get feedback on their work from expert faculty and the general public; we want students to experience the reflection and collaboration that can happen through presenting work at conferences. 3) To give them dedicated feedback on their presentation skills. Too often we focus entirely on the content of presentations; students need to learn that *how* you communicate is as important as the content itself. We aim to provide specific feedback in that regard. We run presentation workshops for all presenters (mandatory for all students selected to give an oral presentation). These workshops seek to help them become better communicators of their knowledge, especially learning the skills of how to communicate with people outside of their field of study.

At the 2018 Expo, more than 200 people heard the talks of 42 students across 8 panels. The students were selected based upon recommendations for faculty. An estimated 300 people heard over 80 students give poster presentations at one of our two large sessions; 4 faculty were recruited to judge each poster presentation, including two experts from the students’ field and two non-experts, cumulatively totaling over 100 supporting faculty. Finally, a crowd of about 50 experienced the Creative Arts Festival, where students performed dance, staged readings as well as showcasing documentary, narrative, and even a 360 degree virtual reality film.

Additionally, this year we partnered with the Sigma Xi Society to create a Best Overall Poster (**Elizabeth Odunsi**, “Droppin’ Knowledge: Hip Hop’s Portrayal of the Criminal Justice System”) and Best Overall Oral Presentation (**Jamilah Silver**, “The Role of Home Environment, Temperament, Family Warmth & Attachment: Moderators and Predictors between Exposure to Violence and Depressive Symptoms in Low-Income Preschoolers”) awards. The awards were determined by a rubric provided to faculty judges, and these awards were recognized at the Honors Day ceremony during commencement. First place at the Creative Arts Festival, as adjudicated by a professional jury, was split between **Katherine Ippolito** and **Calvin Ticknor-Swanson** for their dance piece *Station* and **Neha Hashid** and **Ammar Younas** for their documentary film *Kiln*. Neha and Ammar are students from NU-Q, and the film was funded through a Summer URG the previous summer on bonded labor in Pakistan.

**“I feel that presentation gives me an opportunity to showcase and be proud of my hard work, while gaining valuable speaking skills and getting the opportunity to interact with students and faculty who are experts in my and other fields. This interactive nature of research is exciting to me as a student and young professional interested in research.”**



*Joshua Inwald, (WCAS/SESP '18) is presenting his Senior thesis work titled “The Effects of Meta-Cognitive Priming on Hiring Discrimination” to President Shapiro, EECS Post-doc Willie Wilson, and Psychology Professor Benjamin Gorvine*

## OTHER INITIATIVES:

The Office of Undergraduate Research has grown to encompass more than the specific core programs that we administer (and the advising connected to them). There are a number of additional initiatives that now take up an increasing amount of time for the staff. However, all of these initiatives remain directly connected to the core mission of OUR. This next section will offer brief summaries of these other initiatives.

### Beckman Scholars Program:



**“Having experienced research as an undergraduate has been eye-opening and gives you a realistic idea of what high-level research is like. Undergraduate exposure to research aids in the understanding of scientific papers, collaborative work and is a start of a career in science.”**

In 2016, the prestigious Beckman Foundation awarded Northwestern with the Beckman Scholars Program. The program provides funding and support for students that we believe show advanced research and leadership potential. The Principle Investigators for the grant are Dr. Chad Mirkin (WCAS, McCormick, and Feinberg) and Dr. Peter Civetta (OUR). There are twelve faculty approved to serve as Beckman Scholar mentors, and all applicants must come from one of these labs; these faculty are Dr. Guillermo Ameer, Dr. T. David Harris, Dr. Michael Jewett, Dr. Chad Mirkin, Dr. Ishwar Radhakrishnan, Dr. Carl Scheidt, Dr. Samuel Stupp, Dr. Regan Thomson, Dr. Keith Tyo, Dr. Emily Weiss, Dr. Gayle Woloschak, and Dr. and Dean Teresa Woodruff.

Student applicants are vetted by the URG Committee, who selects finalists for interviews; the interviews are conducted by a subset of the Beckman approved faculty. Two winners are chosen each year, and the winners receive \$26,000 across the next 15 months. The award comes in the form of summer and academic year stipends, money for supplies, and money for attendance at conferences. OUR also provides two workshops per quarter to help with their professional development. One workshop per quarter is devoted to the development of better oral presentation skills. The other workshop focuses on areas of interest for the scholars; this year’s workshops included admissions representatives from The Graduate School, representatives from the Office of Fellowships, and representatives from Research Computing. All winners must attend the annual Beckman Foundation Symposium, and they must present on their research at the end of the funded time. The term of the grant to Northwestern is three years with the opportunity to apply for additional years.

Now in the second year of the program, we have a full 4-person cohort. The 2016-17 scholars are Emily Zaniker (Teresa Woodruff) and Sam Davidson (Mike Jewett) - pictured above at the Beckman Symposium; the 2017-18 scholars are Melody Guo (Regan Thomson) and Kelly Zhu (Ishwar Radhakrishnan). Emily and Sam’s terms end in the summer of 2018. Sam graduated in 2018, and he will be pursuing a PhD in Chemical and Biological Engineering at Cal-State. Emily will be a senior this year.

## OTHER INITIATIVES:

### Research Workshops:

**“If I hadn’t taken SRW, I would have stopped pursuing research.”**

In winter quarter, we offer two quarter-long workshop series to support students potentially interested in applying for Summer URGs. The Science Research Workshops (SRW) program focuses on research group/lab-based research, and the Arts, Humanities, and Social Science Workshops (AHSS) focuses on students who will be developing their own projects. SRW enrollment was 91% first and second year students interested in learning more about research, seeking support to help get into a research group/lab, and hoping to apply for a summer grant. Of the 20 students who found a placement, 10 ended up applying for a Summer URG. Of that group, 5 were awarded URGs, a high success rate considering that most were not even in research group/labs when the workshop began 10 weeks before the grant deadline. SRW participants also applied to multiple other programs, including the IPR Summer Grant, the Lambert Grant, Summer URAPs, the Transportation Grant, Weinberg Summer Grants, the Neuroscience Departmental Grant, among others. Overall 16 of the 20 students enrolled in SRW received research funding for their summers, a higher success rate than the general population. Student participants felt that the community built around research through the program strongly enhanced their persistence after several rejections. In addition to teaching grant writing, SRW leader Evangeline Su worked to increase the peer mentor leadership role with the program, improve teaching effectiveness for reading primary literature, add in diversity and inclusion awareness, and support to mentoring up component of the program.

The Arts, Humanities, and Social Science Research Workshops (AHSS) was led by Peter Civetta. 12 students enrolled from a wide variety of disciplines, although 5 ended up leaving the program to pursue other opportunities. Of the 7 who persisted, 5 were awarded Summer URGs and 1 received the Posner Grant from WCAS, and feedback from participants was extremely positive.

These workshops provide a potential scaling up model for OUR advising, as both workshops cover the same ground that occurs with individual advising. We are continuing to try and find ways to further develop these programs in order to enable us to reach more students without needing to increase staff.

**“I loved this workshop series (AHSS)! It was always engaging, and every single session I came away with a new insight that I could put to use in the coming week. You must keep doing this!”**

### Global and Research Opportunities Database:

In 2015, a joint project between NUIT (A&RT), the Office of the Provost, and the Office of Undergraduate Research produced the Global and Research Opportunities database (<http://globalresearchopportunities.northwestern.edu/>), a comprehensive searchable database of opportunities to get involved in research and global experiences for students, faculty, and administrators. The site remains a significant success. Between April 2017 and April 2018, the site experienced over 14,000 users who had over 21,000 sessions that included over 73,500 pageviews. The site is a key part of OUR advising, and over 73% of the traffic on G&RO was directed there from the OUR site. In particular, students use the database to find research group/lab opportunities; over 61% of the total pageviews were for research group/lab opportunities.

## OTHER INITIATIVES:

However, much of the global data on the site remains underutilized, so we are doing an assessment of the project. Peter Civetta convened a group of relevant parties from across the University, and Global Marketing is currently conducting a user testing evaluation for the site. The site is particularly valuable for undergraduate students, as seen by the analytics, and it could be a significant resource for first generation and/or low-income students who often struggle to locate available resources and opportunities. In question is whether additional value can be found or should be excised. For example, there is some content around faculty exchange opportunities that faculty are not using; either a point person would need to be dedicated to promoting the data, or it could be removed from the site. Additionally, newly incoming Buffett Institute for Global Studies Director Annelise Riles will play a role in the future and development of the site. OUR plans to advocate strongly for the importance of the site for all undergraduate students.



### Peer Mentor Program:

This year the Peer Mentoring program expanded to pair two peer mentors with URAP students, in addition to 19 other peer mentors each paired with 10-15 SURG winners. Peer mentors are expected to check in with their mentees every ~2 weeks of summer, foster community amongst students, and help point mentees to resources in the event they encounter challenges during their research project. This year, Peer Mentors helped contribute to a new resource guide we distributed to grant winners called “Grant Man’s Guide to Adulting”. With the new two year requirement to live on campus, many first and

second year students (a growing population of SURG winners) have not lived outside a dorm room and are not sure how to go about finding a sublet for summer, cooking and grocery shopping, etc. The content focused on areas such as summer housing, budgeting, cooking, public transit, and free summer social activities. We will revise this each year with incoming peer mentors and provide it as part of the URG award announcements.

### Research Community Building:

Although we developed a mandatory “Research Skills Workshop” in the past few years for SURG winners, the summer grant period felt like an underutilized window of opportunity to support students’ professional development and engagement in additional research-related activities. In partnership



TGS Students Schnaude Dorizan (NUIN), Curtis Wang (EECS), Bon Ikwuagwu (Chem/Bio Engineering), Maria Dikcis (English), Ivan Hernandez (Psych), and Alvita Akiboh (History) shared their perspectives as NU Graduate Students to undergraduates interested in advanced degree programs.

## OTHER INITIATIVES:

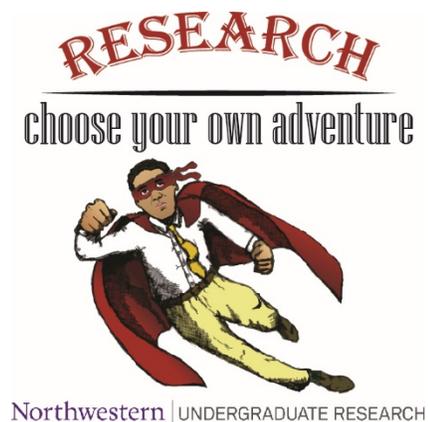
with many other units on campus, OUR sponsored 2-3 workshops each week, which all undergraduate students conducting summer research (regardless of funding source) were invited to attend. Currently 338 students are members of the Summer 2018 Undergraduate Research Community Facebook group; 587 students were invited (other funding mechanisms include WCAS Summer grant, IPR, SIGP, various REUs, etc).

A total of 28 workshops/seminars/discussions were coordinated by the Office of Undergraduate Research in partnership with other units on campus. The summer workshops with highest attendance included *Networking in Research* (led by Prof. Mike Jewett and Prof. Keith Tyo, co-sponsored by the Synthetic Biology REU program), the *Graduate Student Panel Discussion* (moderated by Megan Wood, with TGS Student representation across disciplines), the *National Science Foundation Graduate Research Fellowship Program Workshop* (led by LaTanya Williams in the Office of Fellowships), and *Research to Resume* (led by Larry Jackson in Northwestern Career Advancement).

## YouTube:

In 2014, Peter Civetta received a grant from the Arthur Vining Davis Foundations to create educational videos to help teach students about the research process. Working with NUAMPS, it led to OUR's own YouTube page: <https://www.youtube.com/user/OURNU>. There are three main components to the site. Peter wrote a 7-episode comic web series entitled *The Adventures of Grant Man*, which goes through the process of conceiving and developing a project through to the writing of a grant proposal. The episodes have been viewed over 13,000 times, including over 4,000 for the one of proposal writing. Grant Man has evolved into the OUR de facto mascot, now appearing on promotional flyers and laptop stickers with the tagline "Choose your own adventure."

Second, there are 15 "Research in..." videos where leading faculty are interviewed about what research looks like for undergraduates in their field and what the steps are to get started. While not as popular as the *Grant Man* videos, they still provide a useful resource for student unfamiliar about how research works in the arts and humanities. For example, we have almost 300 views on our video about literary criticism research. Finally, we have a series of videos that serve as resources for students explaining the *what* and *whys* of research along with videos explaining various programs. Many of these videos have proven enormously popular; the "What Is Research?" video has 16,700 views, including 4,288 during the 2017-18 academic year. Altogether, our YouTube videos have amassed over 51,000 views, which we feel is a very significant number for academic material.



In 2016, we were approached by the UKs Sage Publications, who was interested in the *Grant Man* series. We entered an agreement to license the series to them while being able to keep it up (and free) on our site. In the first year, we received over \$1,500 in royalties for this usage, which has been put into our grant funding. While there are currently no video projects planned, we are exploring the

## **OTHER INITIATIVES:**

idea of using video as a means of sharing our finding a lab workshop information, and we may move towards more videos in the future.

### **CAURS (Chicago Area Undergraduate Research Symposium):**

CAURS was created 14 years ago by a Northwestern student, who wanted to provide opportunities for students at area schools to get together, share their work, get feedback from faculty across all of the schools, and gain presentation experience. Six schools sponsor the event: University of Chicago, Loyola, DePaul, Illinois Institute of Technology, Roosevelt, and Northwestern. Peter Civetta serves as the faculty sponsor of the event and its finances run through OUR administrator, Bryce O'Tierney. Their annual conference is organized and run by a student board. This year's event was held at DePaul University. Northwestern students received three of the six awards given at the symposium, including for best overall oral presentation by Christine Liu. Northwestern student Fidak Kahn will be the director of the 2019 event, and it is scheduled to be held at the Lurie Cancer Center in the spring of 2019.

### **TEDx Northwestern:**

Six years ago, a group of students contacted a faculty member about helping to bring a TEDx conference to campus. After two successful years, the faculty member left the University, and Peter Civetta became the faculty sponsor. This year's event was organized by juniors Ryan McAdams and Rebecca Fudge along with a student board of twelve. TED has strict limitations on the size of venues/audience, requiring additional training to move up from our 100 seat limit. We raised funds to send Ryan to a full TED conference event (in Tanzania), and through this work, we were able to move the event to the much larger Galvin Hall in the Bienen School of Music. The event was called "Against the Grain" and featured 9 talks, including Northwestern Provost Jonathan Holloway. It was an impressive day, and all of the talks are now available on the TED web page. New directors have been named for 2018-19, and planning has already begun for the spring 2019 event.

## OTHER INITIATIVES:

### OTHER INITIATIVES GOALS FOR 2018-2019:

One of the primary goals associated with these additional OUR initiatives is the building of a culture of support and collaboration in research at Northwestern. Now that we have a solid foundation to advise and fund student projects, we are focusing more now on the overall environment in which research takes place. Whereas research is often a solitary experience, we seek to create a sense of community through peer mentorship, workshops, and social events designed to tie together people in disparate fields and locations. Megan worked this summer to dramatically expand the number of community based options, including the creation of an online (Facebook) community forum that included students involved in research but not funded by OUR. This fall will plan to further analyze the results of the events, debrief with some of the students and peer mentors involved, and collaborate with the Advisory Council to determine the best approach moving forward. Our goal is to create a community that can advise and support students after funding decisions while the real work of research is taking place. Other goals for the year include:

- As mentioned earlier in this report, we will also be looking this year for ways to scale up other methods of advising, focusing on the research workshops series as a potential model. Evangeline will lead these efforts.
- Peter will lead efforts to support and potentially expand the Global and Research Opportunities database, particularly seeing if it can be used as a core resource for first gen, low income, and/or underrepresented minority students. He will work closely with the new executive director of Buffett to ensure the needs of students are kept in the forefront of conversations around the database.
- The initial term of our Beckman Scholars Program award will end this year. Peter will lead efforts with Development to apply for a second term.
- Peter will continue to serve as the faculty sponsor of the Chicago Area Undergraduate Research Symposium and TEDx Northwestern, working the student organizers to facilitate high quality events as well as seeking to integrate the programs more fully into the overall undergrad research community.
- Continue to partner with other units to offer summer programming, focusing on bringing together students across all fields and helping students develop professional development skills
- Finally, we will begin exploring ideas for future video work to supplement our YouTube page, looking into potential funding sources.

## APPENDIX 2: DEMOGRAPHIC ASSESSMENT OF OUR GRANT PROGRAMS



**Liz Curtis (SESP 2021)** received the **Undergraduate Research Assistant Program** grant to study fake news with Professor David Rapp.

“I heard about it from the URAP website and it peaked my interest because it seemed really relevant to current political discourse. It seemed like processing fake news wasn’t something you could actually study. Doing this research gives me a good stepping stone to doing more research in the future.”

**Nicolette McManus, Environmental Science, WCAS 2019**

### **Summer Undergraduate Research Grant**

(Black-and-White Ruffed Lemurs: A Study on Habitat Degradation and Human Development’s Impact on Gastrointestinal Microbiota and Species’ Health)

“My project opened my eyes to the realities of many sensitive concepts I had only read about in papers or learned in class. Now, I feel confident in knowing how to approach sensitive concepts and how to pursue research intentionally.”



**Hatim Rachdi, Undecided, NU Qatar 2021**

**Undergraduate Language Grant (German)**

“During my time in Berlin, throughout my interaction with a completely different culture, people, environment, and language I developed a progressive mindset, which I believe is the core of growth. The ULG experience brought a significant change to my life, even for 6 weeks, and it goes without saying, change brings growth.”



**Kimani Isaac, SESP 2020**

**Summer Undergraduate Research Grant  
(Can Art Solve Synesthesia’s Ineffability?)  
Undergraduate Language Grant  
(French in Morocco)**

“I think that because I received a URG, I feel less scared of the idea of research, and have realized that it's a skill anyone can learn to do with the right guidance and practice. The URG was my moment to begin figuring out what research means to me, and how I want to use it to explore critical questions.”

## APPENDIX 2: DEMOGRAPHIC ASSESSMENT OF OUR GRANT PROGRAMS



**Yufan Yang, Biology and Psychology,  
WCAS 2019**

**Summer Undergraduate Research Grant**  
(Combining Nanoparticle Morphology and Charge to Enhance Cell-Specific Targeting)

“Whether it be gaining experience working collaboratively with others for a long period of time, establishing myself as a reliable and dependable team member by being punctual and carrying myself with professionalism, or learning how to be patient and overcome multiple setbacks to a project and brainstorm new ideas, research has been a highly formative experience throughout my undergrad career.”

**Michelle Kim, Journalism, Medill 2019**

**Summer Undergraduate Research Grant**  
(Fostering Innovation in Urban Startup Ecosystems)

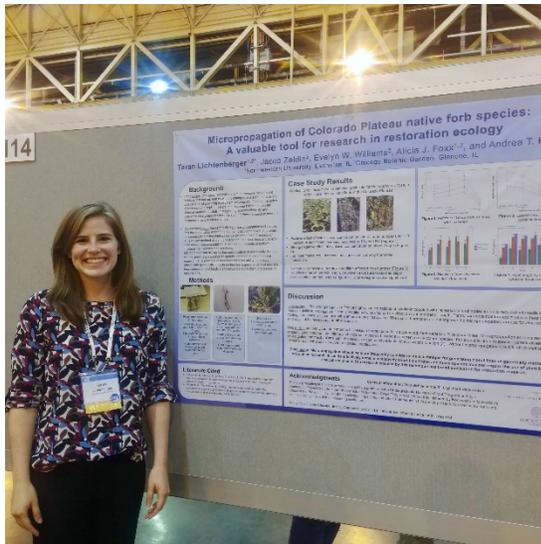
“This project has been a true practice of developing my own analytical frameworks and style of storytelling—which will prove valuable in any career I pursue.”



## APPENDIX 2: DEMOGRAPHIC ASSESSMENT OF OUR GRANT PROGRAMS

**Imani Wilson (SESP 2018)** received both the **Summer** and **Academic Year Undergraduate Research Grants** to complete a senior thesis project.

“Black teachers across the U.S. have been declining in numbers from the public education system; that’s the motivation behind my research. I’ve been talking with black teachers about their experiences within their schools, challenges they encounter with students and colleagues, and more broadly their experiences as teachers, in order to help uncover not only their value and the significance of the work they do, but also why we might be seeing a decline of black teachers on a national scale.”



**Taran Lichtenberger, M.S. Candidate 2019,**  
**Plant Biology and Conservation**  
**Academic Year Undergraduate Research Grant**

“I have grown from a student to a scientist as a result of my undergraduate research.”

## APPENDIX 2: DEMOGRAPHIC ASSESSMENT OF OUR GRANT PROGRAMS



**Jennie Werner (McCormick 2018)** received a **Conference Travel Grant** to share her research on opportunistic interactions. Her research focuses on building technologies to support and explore the design of these interactions.

“In college, there are so many forces that make grades feel like the goal, but in research, the goal is to learn and develop skills for learning. Research has taught me how to figure out how to approach a large, unknown problem, how to

structure questions when asking for help, how to prioritize given time constraints, and how to communicate to different audiences and in different forms. The research mentality more than anything has shaped my academic experience and influenced how I approach my classes.”

### **Emily Zaniker, Biology, WCAS 2019**

#### **Summer Undergraduate Research Grant and 2016-17 Beckman Scholar**

“My project has taught me to value interdisciplinary work. Though I am a biology major, I have learned so much about chemistry, physics, engineering, and public health by taking on projects that extend beyond my field. I have also grown in my confidence within the lab. I am able to come up with my own project ideas and contribute ideas to other lab members during lab meetings. Poster sessions, conferences, and workshops at the Office of Undergraduate Research have helped me become a more effective presenter and have helped me understand how to explain my work to people with and without extensive scientific backgrounds.”



*Emily Zaniker, (r), with second 2016-17 Beckman Scholar, Sam Davidson*



*Alena Prcela teaches multimedia journalism skills to youth in the Ojibwe tribe during her Summer 2018 URAP with faculty Patty Loew.*

**Alena Prcela, Journalism and Literature,**

**Medill 2020**

**Undergraduate Research Assistant Program**

“In conjunction with Medill professor Patty Loew, members of the Bad River Band of the Lake Superior Ojibwe, and the National Park Service, I taught multimedia journalism skills to tribal youth so that they could document their community's Traditional Ecological Knowledge (TEK) for tribal and park service use. Participating in undergraduate research was incredibly rewarding. In addition to learning an immense amount about Ojibwe history,

traditions, and culture from Ojibwe tribal members themselves, I worked with a faculty mentor and developed the confidence to participate and even present in professional settings. More so, living and working in a community I was previously unfamiliar with taught me the importance of putting myself out of my comfort zone and then remaining open to any and all experiences, friendships, and stories that followed.”