

2017 Amherst College SURF Report



The SURF Program

Since its inception 28 years ago, Amherst’s Summer Science Undergraduate Research Fellows (SURF) Program has offered nearly 600 rising sophomores and juniors the chance to conduct scientific research on Amherst’s campus during the summer. For many participants, the SURF Fellowship provides their first immersive research experience and introduction to the life of a scientific researcher. The program fosters bonding with other researchers, by housing the SURF Fellows together on campus and offering workshops and social activities to connect Fellows to the wider campus research community. All Fellows work closely with a faculty mentor and devote 8 to 10 weeks to their research projects. The program has helped propel students into STEM careers: after leaving Amherst, over 70% of SURF participants become research scientists, physicians, dentists, or veterinarians.¹

2017 SURF Program

Amherst’s 2017 SURF Program was our largest ever, with 43 Fellows and 25 faculty mentors taking part. As the program has grown, so has participation from under-represented student groups. Of the final placements in summer 2017, **nearly half** (49%) met criteria for **under-represented** (first-generation, under-represented minority, or low-income). As in summer 2016, a slight majority of Fellows were **women students**—representing a notable shift since 2013, when just over 30% of SURF Fellows were women.

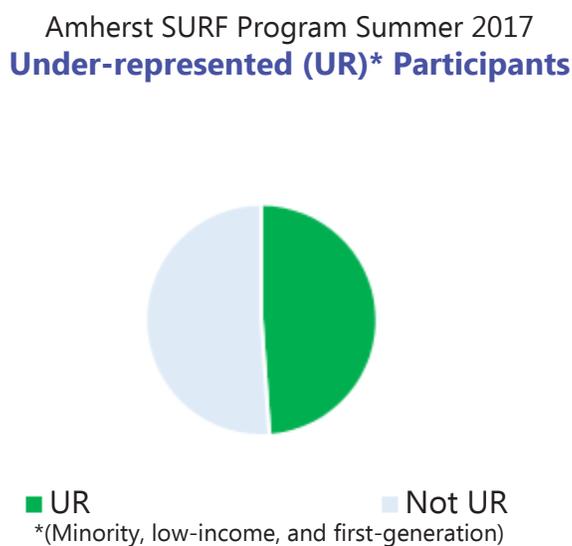
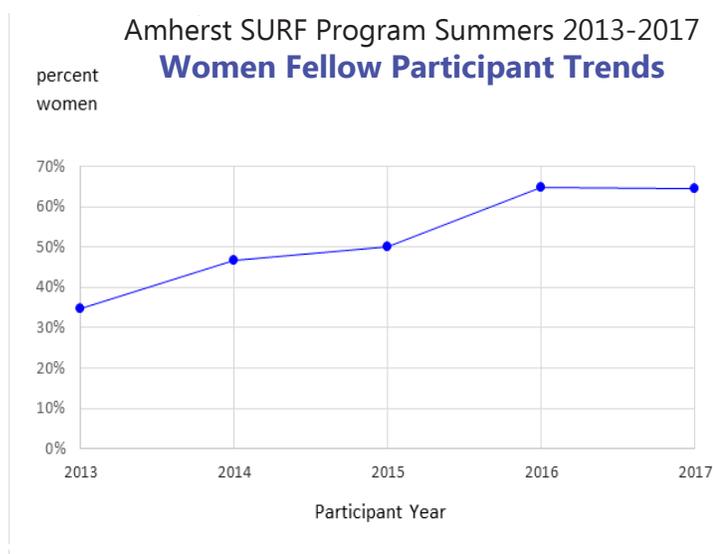


Yuxing “Emily” Ma ‘20
Maria Stenzel, Photographer



SabriAnan Micha ‘19
Maria Stenzel, Photographer

Characteristics of Fellows



¹ Based on analysis of graduate outcomes for participants in class years 1991 to 2011.

Recent Highlights

Student surveys and feedback from participants help SURF staff improve the program each year. Summer 2016 SURF Fellows said they wanted to strengthen their presentation skills. In response, the SURF team, library, and writing center staff organized a series of activities for the summer of 2017 including:

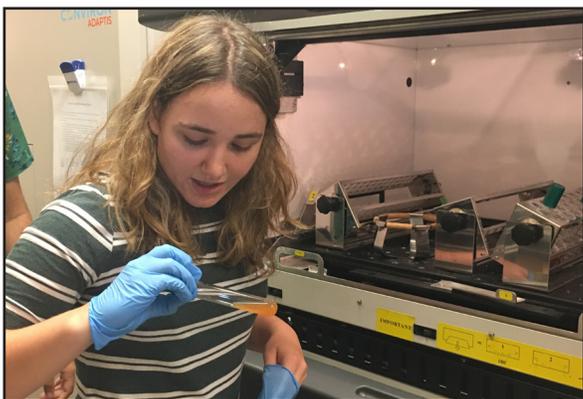
- the “Scholarly Communications in Science” panel, where faculty and former SURF Fellows shared their tips for preparing a compelling poster presentation
- a two-part workshop on the fundamentals of “Design Principles for Research Posters” and “Constructing Posters for High-Impact Communication”
- the “Your Research: Let’s Talk About It!” workshop organized by Susan Daniels, Associate for Public Speaking, which gave students practice and feedback for delivering talks on their research project and feedback on how to improve.

These activities built on the Blitz Talks (short, 5-minute summaries given early in the summer) in which the Fellows described their project objectives to fellow researchers.

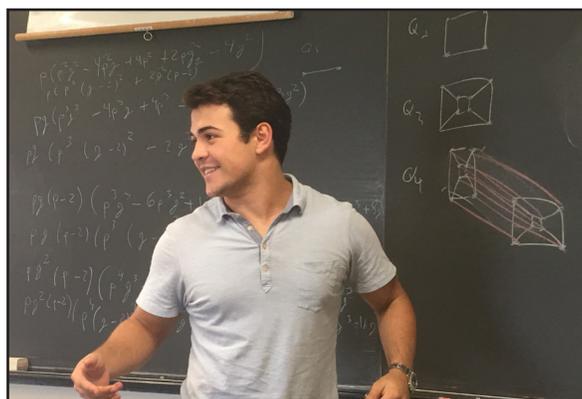


Emily Fedor '20, Stage Lab
Jeanne Weintraub, Photographer

The Fellows’ efforts culminated in a poster presentation to the campus community in September. President Martin, senior administrators, faculty, and staff were on hand at the standing room only poster session, held in the Merrill science center.



Liz Parsons '20, Jeong Lab
Jeanne Weintraub, Photographer



Ezra Alexander '20, Sosa Lab
Jeanne Weintraub, Photographer

Faculty Mentors

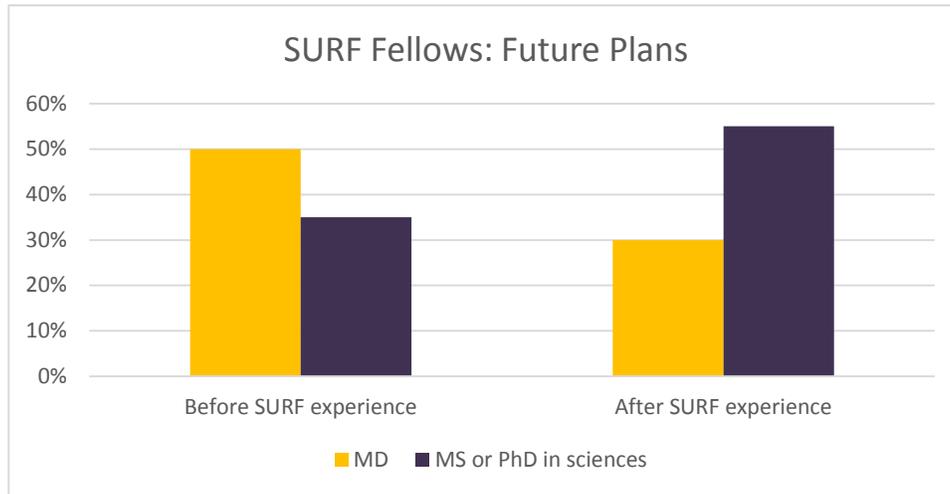
SURF Fellows cite the relationships they form with their mentors as one of the most valuable benefits of the program. In their post-SURF surveys, **94% of students rated their faculty members as “above average” or “outstanding.”** In summer 2017, research projects spanned all STEM disciplines, including computer science (a first).

“It was amazing to be able to consult with the professors and lab managers in other labs...who were able to lend their expertise on an area of my project where I had questions or needed insight.”

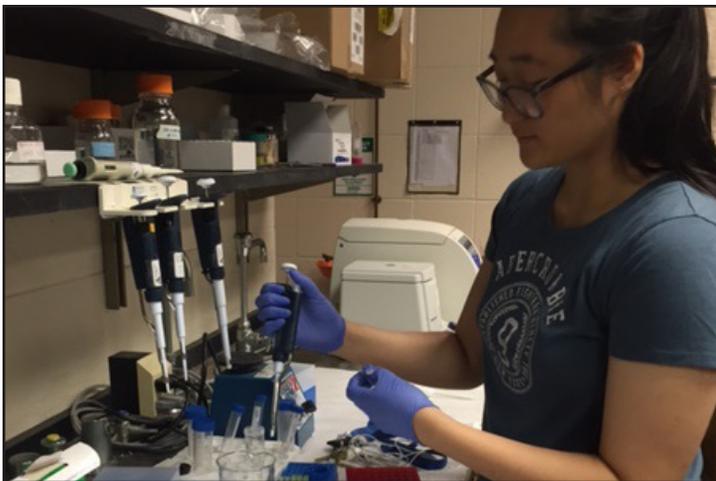
-Kimberly Burnett '19

Impact

As we had hoped, the summer 2017 experience was transformative for Fellows. For a majority (62%), the Fellowship provided a first introduction to hands-on, immersive research. Some students discovered a love of scientific research that altered their career plans.



On their Post-SURF surveys, students chose “understanding the research process” and “being a part of a learning community” as the greatest benefits of the program. An overwhelming majority (94%) of Fellows say they are now likely or very likely to choose another research experience.



Jenny Kim '19, Bishop Lab
Jeanne Weintraub, Photographer

“The workings of a lab aren’t easily taught in classrooms, so I know that this hands-on experiential learning opportunity was incredibly invaluable and rare.”

-Jiwoo Park '20

Looking Ahead

Despite challenges presented by the move into the new science building (scheduled to open its doors in fall 2018), 24 Amherst faculty members tentatively plan to include SURF Fellows in their summer 2018 research programs. Areas of focus for strengthening the 2018 summer program include offering students activities to improve their science writing and to boost self-confidence. Amherst is also exploring better ways to house students and ensure that they have access to a meal plan.