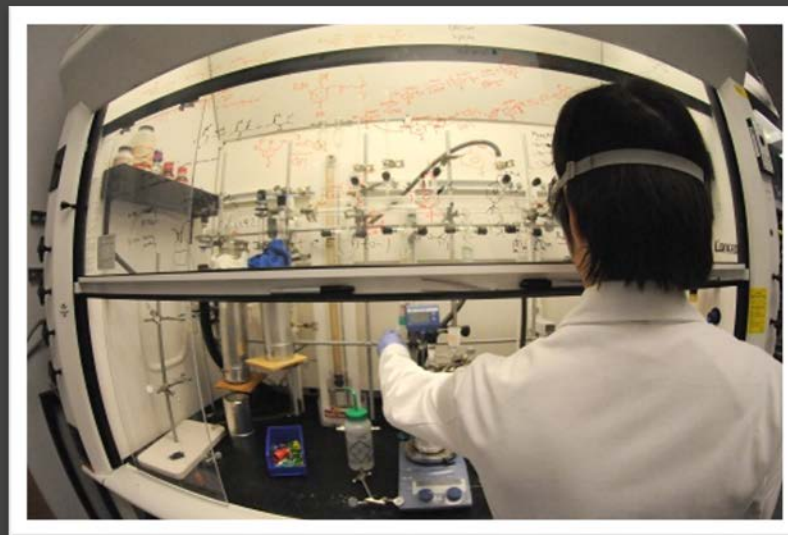


2017 SURF INFORMATION SESSION



Caltech

Student-Faculty Programs Office
www.sfp.caltech.edu

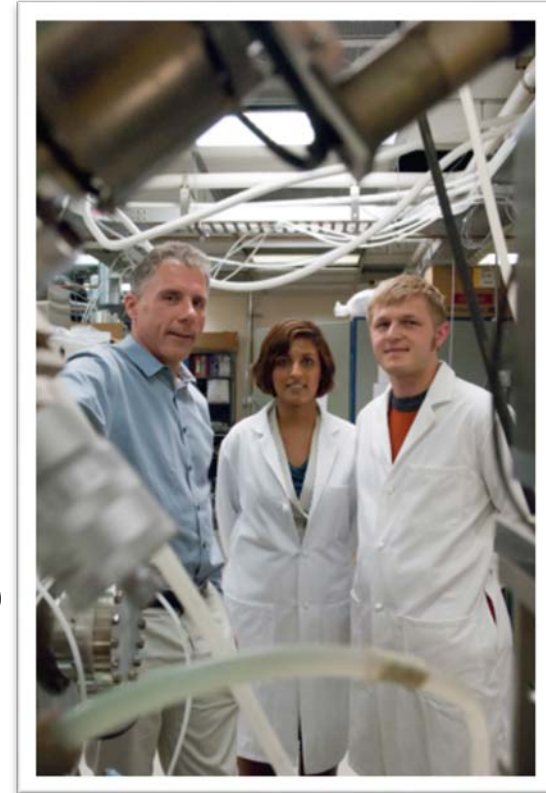
Introduction

- ❑ Overview of SURF
- ❑ The application process
- ❑ Important dates
- ❑ Questions?



Overview of the Programs

- SURF is:
 - ▣ Modeled on the grant-seeking process
 - ▣ Introduction to the research environment
 - ▣ A full-time commitment
- SURF is *not*.
 - ▣ Just a “summer job”
 - ▣ Intellectual bottle washing
(although you may need to wash some bottles...)



SURF Learning Outcomes



Through their participation in an undergraduate research project, students will be able to:

- ❑ develop a research question, problem, or design;
- ❑ apply basic principles and knowledge found in the literature related to the research question;
- ❑ develop a research proposal to address or resolve a specific research question or problem;
- ❑ apply and evaluate methodology throughout the project;
- ❑ collect, interpret, and critique data in order to resolve a research question or evaluate a design;
- ❑ communicate research findings; and
- ❑ appreciate what the process of scientific research entails.

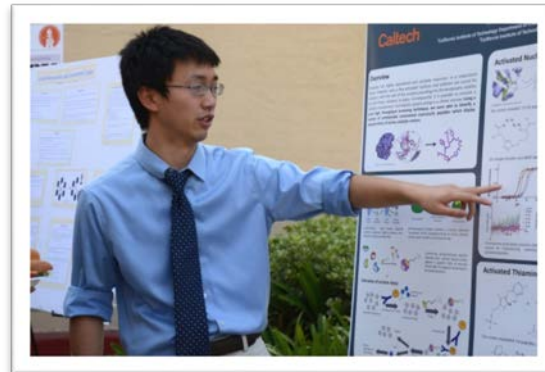
SURF Eligibility for Caltech Students

- ❑ Be a continuing undergraduate student
- ❑ Have a cumulative GPA of at least 2.0
- ❑ Complete the third term at Caltech, or at another school under a program approved by a Dean
- ❑ Be eligible for fall term registration before beginning your SURF project and no later than July 1
- ❑ Not be under any disciplinary sanction



SURF Eligibility for Visiting Students

- ❑ Be a continuing undergraduate student
- ❑ Have a cumulative GPA of at least 2.5/4.0
- ❑ Complete the second semester or third quarter at your college or university
- ❑ Not be under any disciplinary sanction



Overview of Requirements

- ❑ Conduct your project *on a full-time basis* over 10 weeks
- ❑ Progress reports
- ❑ Abstract
- ❑ Final technical paper
- ❑ Final presentation (oral or poster)



SURF Compensation

- ❑ SURF Fellows are considered Caltech student employees and receive \$6,000
- ❑ Students pay for their own housing
- ❑ Campus housing will be available for visiting students



Where can I SURF?

- Caltech
- JPL

For Caltech students only:

- Exchange program sites
 - ▣ University of Iceland (UI)
 - ▣ Gwangju Institute of Science and Technology (GIST)
- Off-campus, U.S. institution
- Off-campus, international institution



How do I find a mentor?



- Mentors need to be a faculty member or JPL technical staff member
 - Staff scientists, postdocs and grad students can be co-mentors, but ultimately a member of the faculty needs to agree to mentor you
- Announcements of Opportunity (AOs)—note: not all faculty do this
- Seminar Classes and Option Seminars
- Talk to your advisor
- Review 2016 Abstracts—available online at https://sfp.caltech.edu/documents/432-2016_abstract_book.pdf
- Ask housemates, classmates, RAs, and SFP Student Ambassadors
- Talk to faculty/instructors in your courses
- Browse the website and contact faculty of interest
- Be sure to look outside your option, much of the research at Caltech is interdisciplinary

How do I find a mentor at JPL?

- ❑ JPL mentors must post Announcements of Opportunity (AOs)
- ❑ Talk to your advisor/faculty about collaborators at JPL
- ❑ Ask housemates, classmates, SFP Student Ambassadors
- ❑ Browse the website and contact scientists of interest
- ❑ Talk to SFP staff



How does a Caltech student find a mentor at another school?

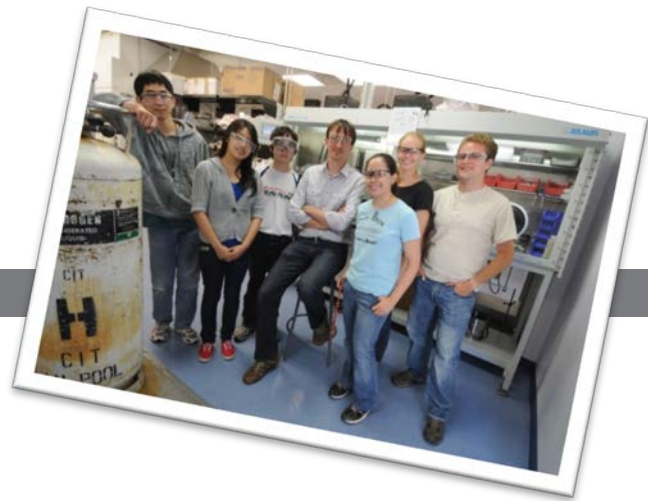
- Talk with your advisor and professors who may have collaborators they can refer you to
- Browse websites of schools you are interested in going to
- Talk to your friends who may go to a school you are interested in
- Check-out option seminars - The speakers are usually from other schools
- Ask the SFP office if there have been students at that school before and who their mentors have been

Hints for Finding a Mentor



- ❑ Start early.
- ❑ Contact multiple possible mentors at once; but don't spread mass emails. Pursue only research groups you are truly interested in.
- ❑ DON'T RELY ON EMAIL!
 - ❑ Visit their office.
 - ❑ Call as a follow-up to an email.
 - ❑ CC the administrative assistant on all emails.
- ❑ Contact the faculty's administrative assistant for help in setting a meeting.
- ❑ Contact a graduate student or postdoc in the group and ask for a tour/meeting to learn more about the group.
- ❑ Look outside your option.
- ❑ Use who you know. Find an undergrad who did research in the lab you want and ask for an introduction.
- ❑ If you are having difficulty, come to the SFP office—early.
- ❑ Be assertive and professional!

The First Contact



- Be professional
- Have confidence that you have something to offer, but don't act entitled
- Provide adequate information about yourself—but not too much
- Learn something about the research topic in advance and state your interest in it
- Request additional references
- Request a meeting or telephone interview
- Review interview guidelines on SFP website

http://www.sfp.caltech.edu/students/getting_started

Overview of Application Process

- Identify a mentor
- Caltech students submit:
 - an application
 - a research proposal
 - two letters of recommendations (not from your proposed mentor)
 - At least one letter must be from a faculty member at Caltech
 - For some, name of a faculty associate mentor
- Visiting students submit:
 - an application
 - a research proposal
 - three letters of recommendation (not from your proposed mentor)
 - All three letters must come from faculty (at least two from faculty in relevant disciplines)
 - an unofficial transcript



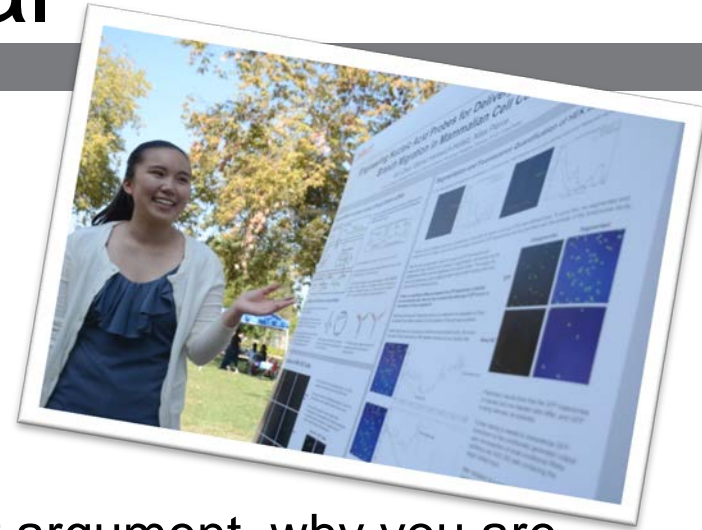
The Application

- ❑ Who you are, where you live
- ❑ Courses you've taken or will take
- ❑ Extracurricular activities
- ❑ Prizes and awards
- ❑ Anything else you want to tell us



The Research Proposal

- The proposal explains:
 - what you plan to do in your research;
 - why this work is necessary or desirable;
 - specifically, how you will do it; and,
 - through your preparation and by force of argument, why you are the right person for the job.
- Clear guidelines are available on the SFP webpage.
- Attend proposal writing workshop in February for more details.
- Note: Your proposal will be reviewed by someone in your general field.



Letters of Recommendation



For Caltech students

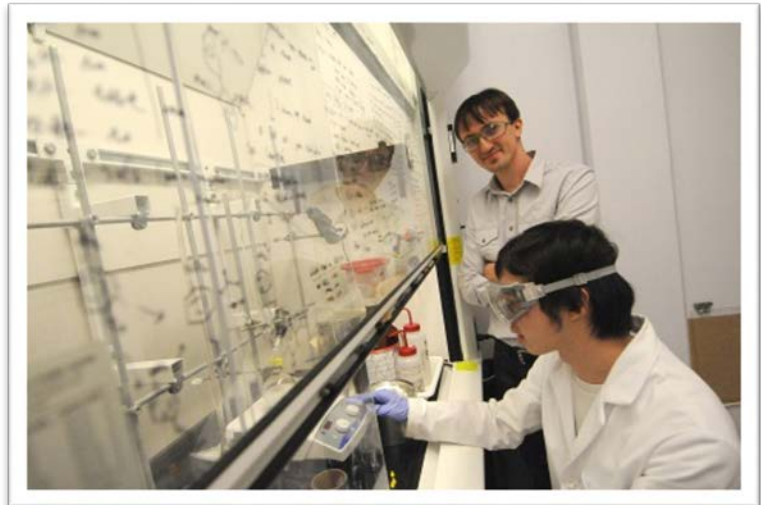
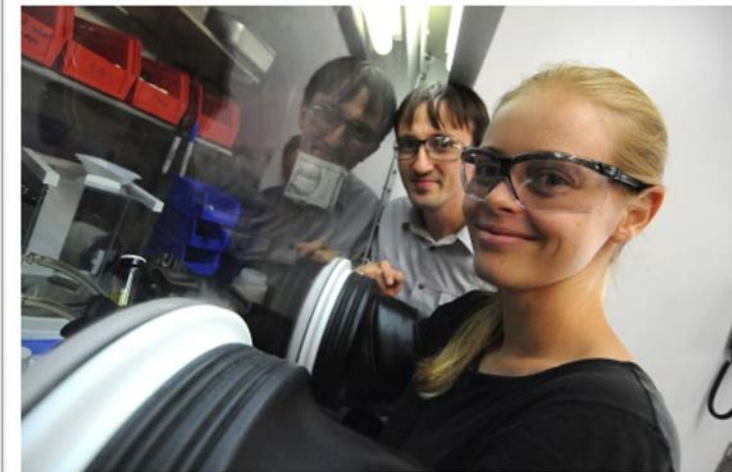
- At least one from a faculty member, who is not your prospective mentor
- The other could be from someone else in the Caltech community who knows you well (TA, coach, RA, glee club director, etc.)

For Visiting students

- Three letters of recommendation from faculty (at least two in the relevant discipline)

The Mentor Evaluation

- Your prospective mentor will submit the mentor evaluation online after you submit your application.



Timeline

| | |
|-------------|----------------------------|
| January | Begin looking for a mentor |
| February 3 | Proposal writing workshop |
| February 22 | SURF application due |
| April 1 | SURF awards are announced |
| June 20 | SURF begins |
| August 24 | Summer Seminar Day |
| August 25 | SURF ends |
| October 21 | Seminar Day |

Other Dates

- ❑ Off-Campus and Exchange SURF Info Session:
 - ▣ January 20 at noon
- ❑ Exchange Applications Due:
 - ▣ February 9



How to Reach Us

URL: www.sfp.caltech.edu

E-mail: sfp@caltech.edu

Phone: x2885

Office: 330 Center for Student Services

