2020 SURF INFORMATION SESSION
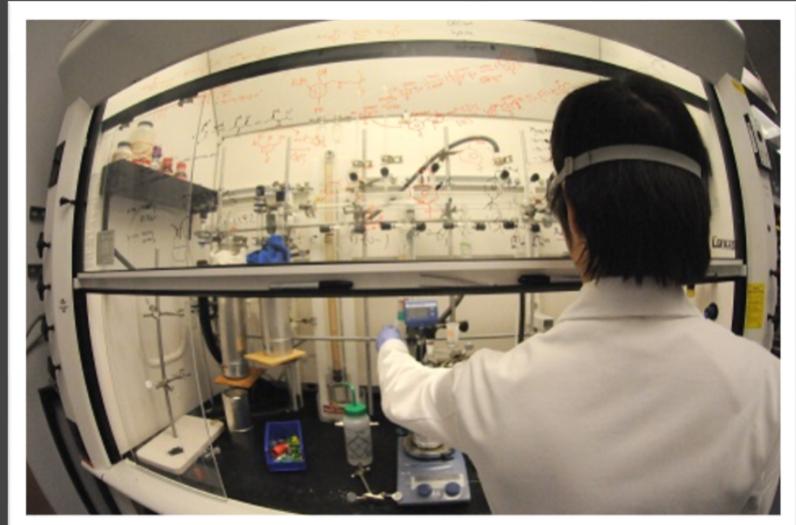
Introduction

- ☐ Overview of SURF
- ☐ The application process
- ☐ Important dates
- ☐ Questions?
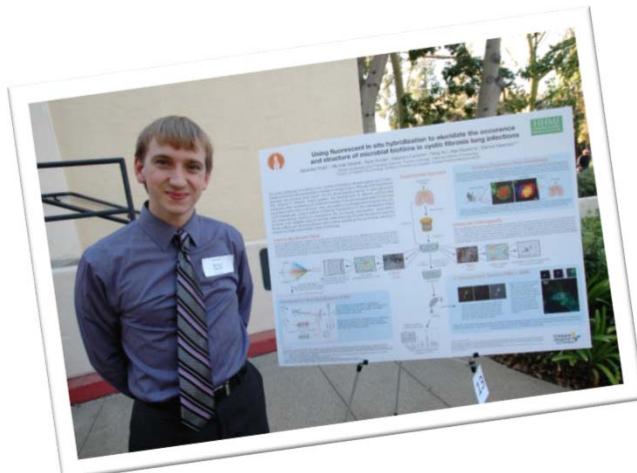
Overview of the Programs

- 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…)
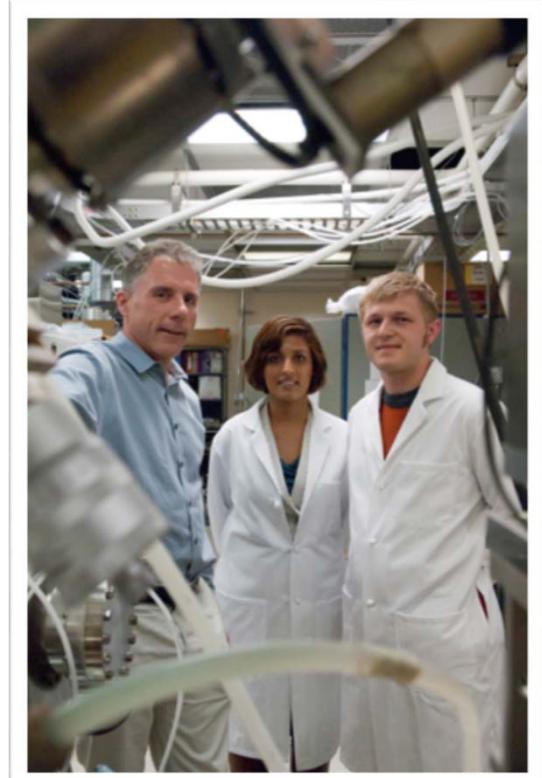
SURF Learning Outcomes

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
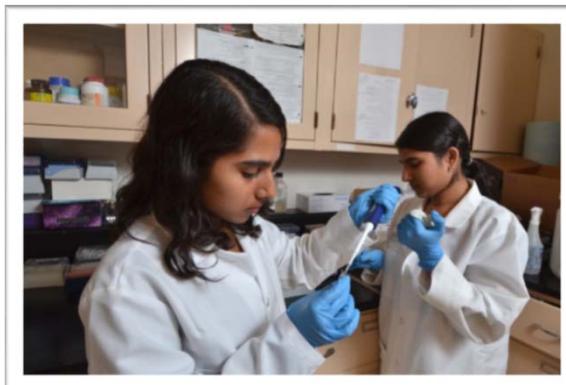
SURF Eligibility for Visiting Students

- 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
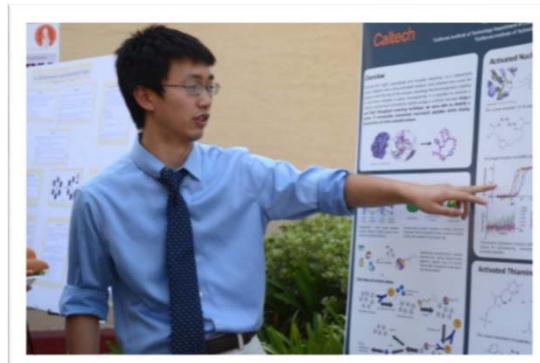
Overview of Requirements

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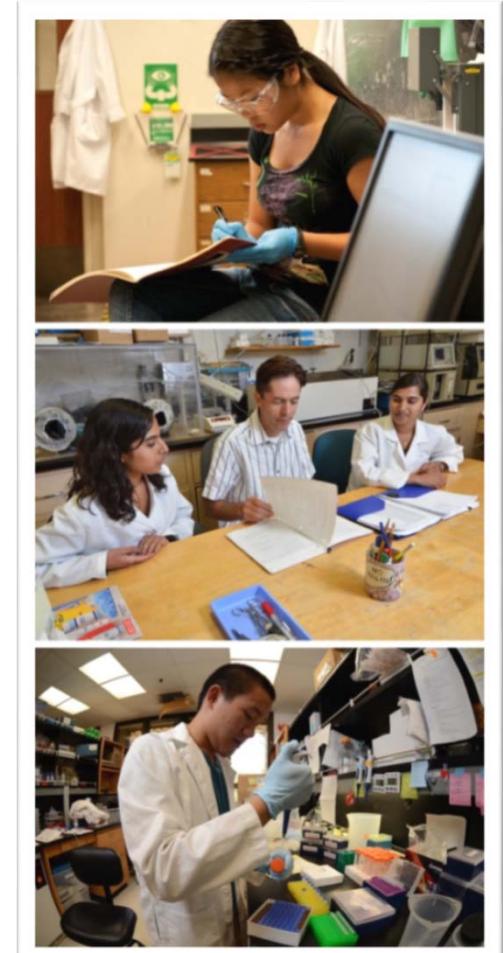
SURF Compensation

- SURF Fellows are considered Caltech student employees and receive $6,420

- Students pay for their own housing

- Campus housing will be available for visiting students
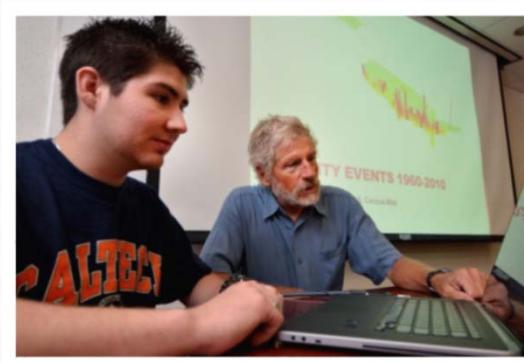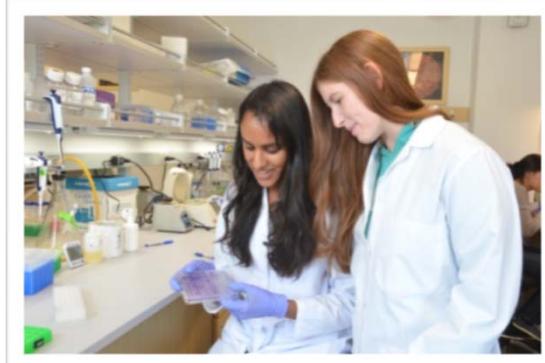
Where can I SURF?

- 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 2019 Abstracts—available online at http://sfp.caltech.edu/about/abstract
- 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

- 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!

- 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.

The First Contact
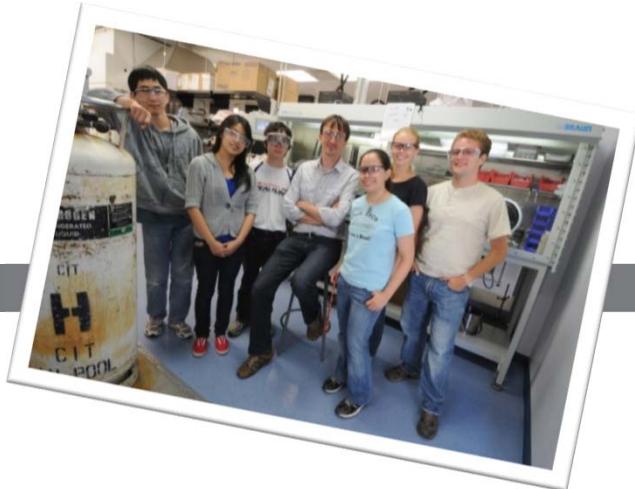
- Be professional
- Have confidence that you have something to offer, but don't act entitled
- Provide adequate information about yourself—but not too much
- Learn something about the research topic in advance and state your interest in it
- Request additional references
- Request a meeting or telephone 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.*SURF Proposal Workshop Dates -1/27, 1/30, 1/31, CTLO/HWC space
- Note: Your proposal will be reviewed by someone in your general field.
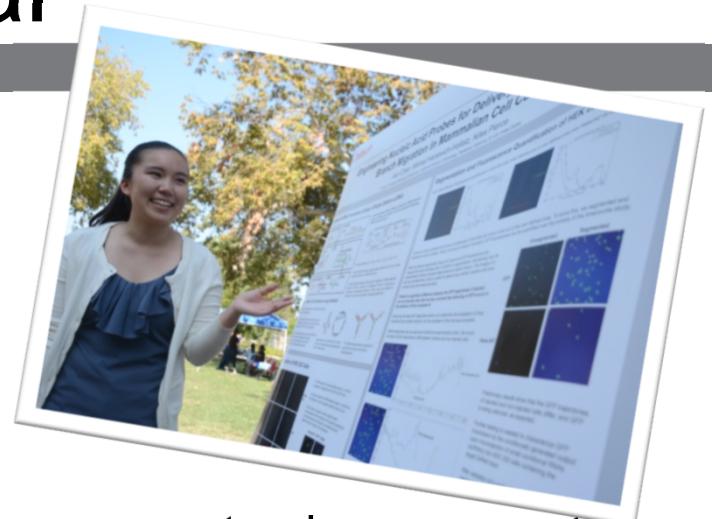
Letters of Recommendation


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.
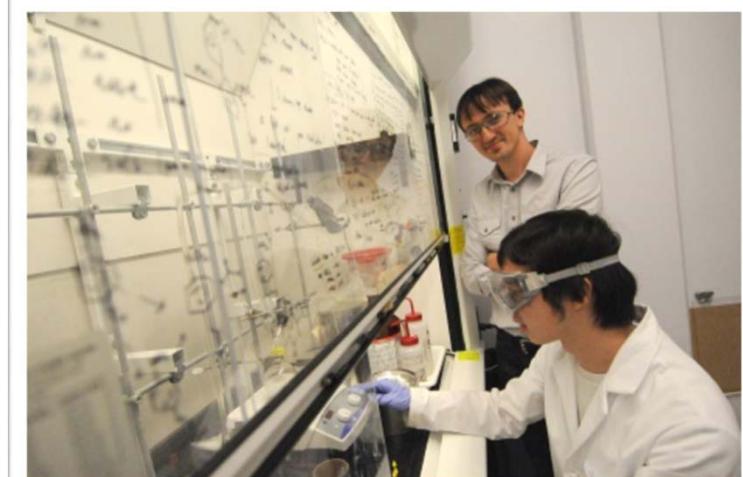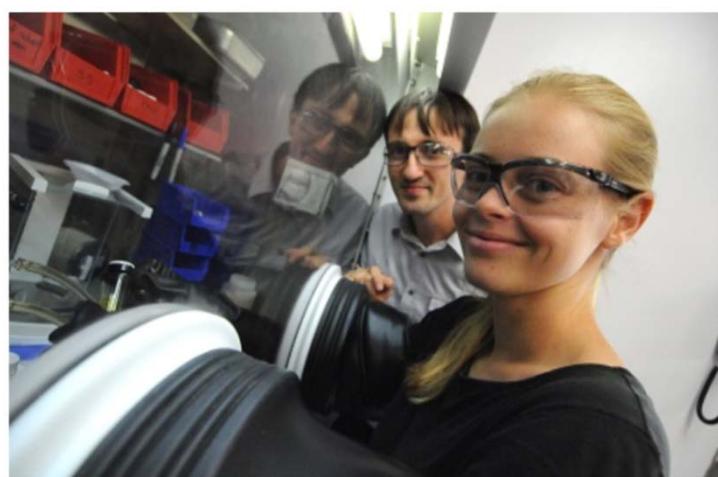
Timeline

January	Begin looking for a mentor
Jan 27, 30, 31	Proposal writing workshops
February 22	SURF application due
April 1	SURF awards are announced
June 16	SURF begins
August 20	Summer Seminar Day
August 21	SURF ends
October 17	Seminar Day

Other Dates

- Off-Campus and Exchange SURF Info Session:
    - Jan 17 and Feb 4 at noon at SFP Office
- Exchange Applications Due:
    - February 14

How to Reach Us

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Phone: x2885

Office: **315 S. Wilson Ave**