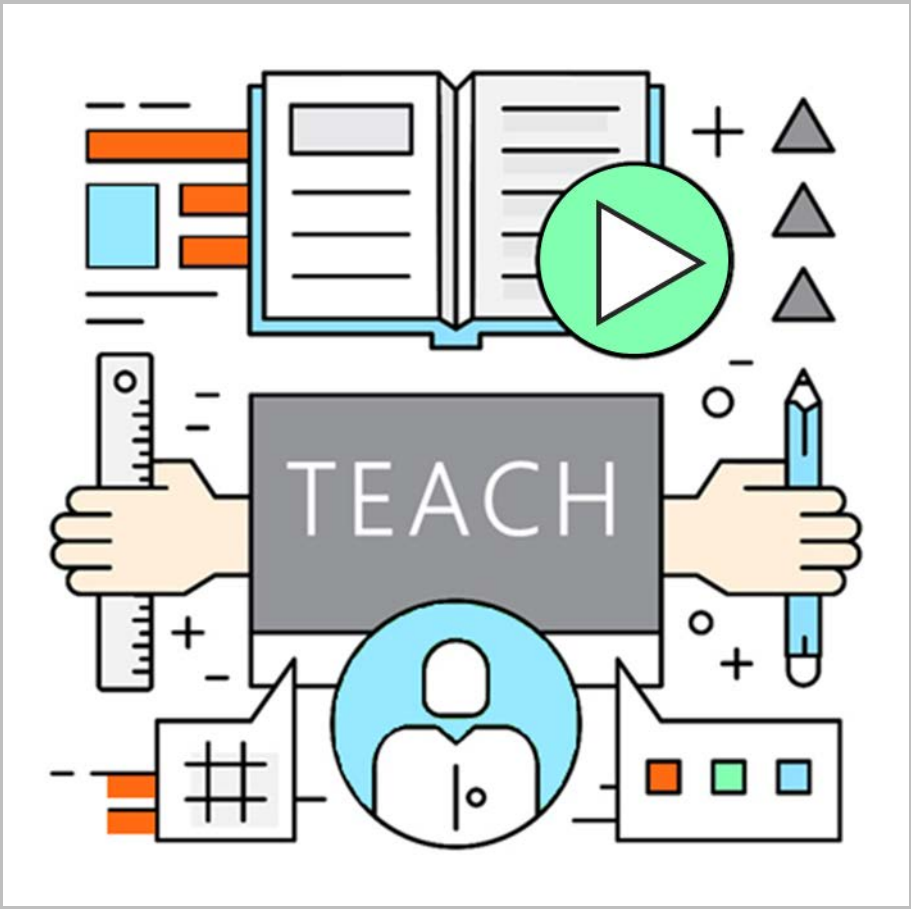
5th Annual Caltech
Teaching Conference

Wednesday, Sept. 20, 2017



Brought to you by the Caltech Center for Teaching, Learning, and Outreach

Want to learn more about Teaching?

Materials for today's sessions are available at:

www.teachlearn.caltech.edu/TAs/conferences

The Caltech Center for Teaching, Learning, and Outreach (CTLO) is your resource for teaching at Caltech!

- Learn more at: www.teachlearn.caltech.edu
- Visit them on the 3rd floor of the Center for Student Services
- E-mail questions and inquires to ctlo@caltech.edu

The Caltech Project for Effective Teaching (CPET) is a graduate student and postdoc group dedicated to improving teaching through seminars, discussion groups, and certificate programs. Check them out at:

www.teachlearn.caltech.edu/cpet

Teaching Conference Schedule

2017 Teaching Conference Schedule							
9:00-10:00 AM	**Opening Session:** Creating Inclusive Classrooms: You Belong Here! **- Baxter Lecture Hall**						
Session Locations	**Baxter Lecture Hall**	**Dabney Lounge**	**Beckman Behavioral Biology B180**	**Baxter Basement B125**	**Baxter 125**	**Baxter 127**	**Baxter 128**
10:15-11:15 AM BLOCK A SESSIONS	Fair Grading and Effective Feedback*	Responding to Student Writing in STEM	Leading Successful Office Hours*	Classroom Communica-tion for International TAs and Others	How Teaching Can Make You a Better Student	Squeaky Chalk and Other Common Challenges	
11:30-12:30 PM BLOCK B SESSIONS	Effective Recitations: Helping Your Students Learn*	Teaching in an Accessible and Inclusive Classroom	Your First Class: Getting off to a Great Start	The Honor Code: Preventing Problems, Handling Issues	Teaching the Global Classroom	PMA TAs: Teaching Problem Solving	Copyright and Plagiarism Considera-tions for the Classroom
12:30-1:30 PM	**Lunch, Dabney Garden**						
1:30-2:30 PM BLOCK C SESSIONS	Leading Successful Office Hours*	Fun and Games in Class	Effective Recitations: Helping Your Students Learn*	Motivating Yourself and Your Students	Building a Teaching Portfolio	Life as a Lab TA	Authoring Problem Sets and Exams
2:45-3:45 PM BLOCK D SESSIONS	Caltech 101: Teaching Undergrads	Storytelling / Improvisation Techniques for Better Teaching (Runs until 4:15)	Fair Grading and Effective Feedback*	The ABCs of Course and Lesson Design	Mentoring Outside the Classroom	Introduction to Chemistry | TA-ing	

Themes	
	Essential TA Skills
	Teaching Development
	Professional Development

Sessions at a Glance

Essential TA Skills

Ideal for new TAs or TAs Teaching a new course for the first time

Fair Grading and Effective Feedback
- Offered in Blocks A, D
- Session Description on Page 6

How Teaching Can Make You a Better Student
- Offered in Block A
- Session Description on Page 6

Leading Successful Office Hours
- Offered in Blocks A, C
- Session Description on Page 7

Effective Recitations: Helping Your Students Learn
- Offered in Blocks B, C
- Session Description on Page 8

Your First Class: Getting off to a Great Start
- Offered in Block B
- Session Description on Page 8

The Honor Code: Preventing Problems, Handling Issues
- Offered in Block B
- Session Description on 9

Life as a Lab TA
- Offered in Block C
- Session Description on Page 12

Caltech 101: What You Need to Know if You’re Going to Teach Undergraduates
- Offered in Block D
- Session Description on Page 13

Teaching Development

Ideal for new or experienced TAs looking to improve specific teaching or classroom skills

Responding to Student Writing in STEM

Offered in Block A

Session Description on Page 6

Classroom Communication for International TAs and Others

Offered in Block A

Session Description on Page 7

Solving the Physical Problems of Teaching: Squeaky Chalk, Eye Contact, and Other Common Challenges

Offered in Block A

Session Description on Page 7

Teaching in an Accessible and Inclusive Classroom

Offered in Block B

Session Description on Page 8

Teaching the Global Classroom: Understanding Your Students' Perspective

Offered in Block B

Session Description on Page 9

Strategies for Guiding Student Problem Solving in PMA (Physics, Mathematics, and Astronomy)

Offered in Block B

Session Description on Page 9

Fun and Games: Creating Enjoyable and Memorable Learning Experiences in a Comfortable Setting

Offered in Block C

Session Description on Page 11

Motivating Yourself and Your Students

Offered in Block C

Session Description on Page 11

Authoring Problem Sets and Exams

Offered in Block C

Session Description on Page 12

The ABCs of Course and Lesson Design

Offered in Block D

Session Description on Page 14

Introduction to Chemistry TA-ing

Offered in Block D

Session Description on Page 14

Professional Development

Sessions focused on broader aspects and benefits of TA-ing and Teaching

Copyright and Plagiarism Considerations for the Classroom

Offered in Block B

Session Description on Page 10

Building a Teaching Portfolio: The What, Why, and How

Offered in Block C

Session Description on Page 12

Storytelling/Improvisation Techniques for Better Teaching

Offered in Block D (runs until 4:15pm)

Session Description on Page 13

Teaching Outside the Classroom: Considerations for Effective Mentoring

Offered in Block D

Session Description on Page 14

Session Descriptions

Opening Session

9:00-10:00AM

Creating Inclusive Classrooms: You Belong Here!

Baxter Lecture Hall

Jenn Weaver, Assistant Director, Center for Teaching, Learning, and Outreach

Erin-Kate Escobar, Assistant Director, Caltech Center for Diversity

In this opening session, we will offer you strategies for creating a welcoming classroom environment such that you give all of your students, with different backgrounds and experiences, the opportunity to excel in your course. By the end of this session you will be able to:

1) Understand the effects of unconscious biases;

2) Define, understand, and mitigate the presence of stereotype threat in the classroom; and

3) Implement active learning strategies to engage every student in the classroom.

Block A Sessions

10:15-11:15AM

A

Fair Grading and Effective Feedback

Baxter Lecture Hall

Kelsey Boyle, Graduate Student, Chemistry

Joshua Brake, Graduate Student, Electrical Engineering

It can be difficult to balance your research and your own courses with the responsibility of being a fair and effective TA for your students. In this session, we will address these issues by covering three main topics: grading efficiently, grading fairly, and providing effective feedback. Here, you will become familiar with communicating expectations with students, making and using grading rubrics, and techniques for giving effective feedback that won't take up all your time!

This session will also be offered during Block D in Beckman Behavioral Biology B180.

Responding to Student Writing in STEM

Dabney Lounge

Susanne Hall, Campus Writing Coordinator in the Hixon Writing Center and Lecturer in Writing

One of the most important ways we learn to write is by getting feedback on our work from thoughtful readers. As instructors in STEM (Science, Technology, Engineering, and Mathematics), though, responding to the many kinds of writing students produce (e.g. papers, proposals, abstracts, reports, lit reviews, response papers, proofs) can be time-consuming and draining. This session will introduce you to research-based findings about the kinds of feedback that are most likely to help students improve as writers and thinkers. Some of these findings are likely to surprise you, as they contradict some very common teaching practices. We will talk together about how to implement response strategies in the real world, where our time and energy for responding to student writers is not limitless.

How Teaching Can Make You A Better Student

Baxter, 125

Annelise Thompson, Graduate Student, Chemistry

Scott Dawson, Postdoc, Aerospace

Teaching can be hard work! Sometimes a teaching assistant just wants to know, "What's in it for me?" At the end of the day, how can learning to be a good teacher make you a better student? Come to this session to find out about evidence-based teaching techniques that can help you ace your graduate classes or just improve your ability to learn and retain information!

Classroom Communication for International TAs and Others

Baxter Basement, B125

Voon Lai, Graduate Student, Geophysics

Stephanie Kong, Graduate Student, Chemical Engineering

Want to break the sound barrier in your classroom? In this session, we will introduce techniques on communicating your course material well and enhancing your spoken English efficiency. We will also discuss simple facilitating steps to create active participation in the classroom, enriching both your teaching experience and your students' learning experience.

Leading Successful Office Hours

Beckman Behavioral Biology, B180

Min-Feng Tu, Graduate Student, Physics

Ben Kanevsky, Graduate Student, Chemical Engineering

Office hours are a big part of every TA's job and also a great opportunity for enhancing students' learning. In this session, we will explore the logistics of setting up various types of office hour environments and successful teaching strategies for clarifying concepts, guiding completion of assignments, and addressing questions. Furthermore, we will discuss how to inspire students to attend office hours, perhaps one of the most important yet difficult skill for a TA to master.

This session will also be held during Block C in Baxter Lecture Hall.

Solving the Physical Problems of Teaching: Squeaky Chalk, Eye Contact, and Other Common Challenges

Baxter, 127

Cassandra Horii, Director, Center for Teaching, Learning, and Outreach

Teaching includes many practical challenges; some of them, like writing on the board while still connecting with students, figuring out where to position yourself in the classroom, and deciding how and when to interrupt a small group of students to help or ask a question, are also physical skills we can learn and practice. In this session, we'll identify some of the most common and vexing "classroom choreography" challenges, learn solutions to help you move through the teaching with more confidence and skill, and do some drills to practice implementing them. Get ready for a fun, supportive, and lighthearted environment where it's ok to try new moves for both familiar and novel teaching settings.

Block B Sessions

11:30AM – 12:30PM

B

Effective Recitations: Helping Your Students Learn

Baxter Lecture Hall

Mike Wong, Graduate Student, Planetary Science

Eric Burkholder, Graduate Student, Chemical Engineering

Recitations take on varied forms at Caltech; as a TA you may encounter large groups of freshmen who are required to be there, or a small handful of graduate students who want you to lead a recitation that isn't normally part of the course. This session will help new and continuing TAs deliver effective recitations to a variety of different audiences. The session will begin with some general strategies -- including planning, time management, and teaching philosophy -- and we'll then break into smaller groups to discuss specific strategies that can be applied to different classroom environments

This session will also be held during Block C in Beckman Behavioral Biology B180.

Teaching in an Accessible and Inclusive Classroom

Dabney Lounge

Felicia Hunt, Assistant Vice President for Equity, Accessibility, and Inclusion and Title IX Coordinator

Red Lhota, Graduate Student, Chemical Engineering

Building an environment where everyone can succeed is the work of all of us at the Institute, including teaching assistants. This doesn't happen by accident; in fact it is an intentional process of creating safe spaces, offering resources and support, and engaging in helpful dialogue. This session will give participants the skills and knowledge for building this classroom environment for students with disabilities.

Your First Class: Getting Off to a Great Start

Beckman Behavioral Biology, B180

Jenn Weaver, Assistant Director, Center for Teaching, Learning, and Outreach

The first day of class can be new and exciting but also a little nerve-wracking. In this session, we'll discuss some of the things that you can do to prepare. We'll go through two checklists: 1) what you can do to prepare for your first class, and 2) what to do during your first class to set you up for a great quarter with your students. Finally, we'll discuss strategies for dealing with some common dreaded scenarios (e.g. problem students and what to say when you don't know the answer).

Block B Sessions

11:30AM – 12:30PM

B

The Honor Code: Preventing Problems, Handling Issues

Baxter Basement, B125

Denise Schmitz, Graduate Student, Astronomy

Stephanie Kong, Graduate Student, Chemical Engineering

This session will provide a more detailed honor code training for TAs. It will include proactive tips to help avoid honor code issues, instruction on proper reporting procedures, and a run-through of what to expect (both as a reporter and for your student) if you make a report. Leadership from both the GHC and BoC will be present for an ample Q&A and discussion session.

Teaching the Global Classroom: Understanding Your Students' Perspective

Baxter, 125

Valère Lambert, Graduate Student, Geophysics

International learning environments, such as Caltech, host students from an array of global educational systems and cultures. As an instructor, understanding the classroom from your students' perspectives is important for effectively communicating your own expectations and minimizing potential barriers for learning. In this session, we will discuss common challenges international students may face coming from different educational systems and how one may adapt as an instructor to minimize these hurdles.

Strategies for Guiding Student Problem Solving in PMA (Physics, Mathematics, and Astronomy)

Baxter, 127

Cassandra Horii, Director, Center for Teaching, Learning, and Outreach

This session is specifically designed for PMA TAs to help you guide students toward learning to be independent problem-solvers, and avoid simply showing or telling them what to do all the time. We will explore some fundamental principles of learning that explain how students gain problem-solving expertise, develop a problem-solving process specific to your discipline that you can use to guide students, and apply strategies to common settings like recitation sections and office hours. Note: this session is required for all PMA G1s, and additional PMA TAs as identified by the Division.

Block B Sessions

11:30AM – 12:30PM

B

Copyright and Plagiarism: Considerations for the Classroom

Baxter, 128

Donna Wrublewski, Chemistry and Biology Librarian at Caltech

Kathy Johnson, Author Services Librarian at Caltech

Instructors and Students frequently reuse and redistribute other people's work in their own presentations, lectures, assignments, and other projects. When is this okay and when does this require permission? Is there a difference in using copyrighted materials vs. those distributed under Creative Commons licenses? What is Fair Use and when does it apply in teaching? This session covers the most common misconceptions about copyright in the classroom and provides tips and tools for reusing others' work effectively and appropriately.

Lunch

12:30 – 1:30PM

Lunch will be held in Dabney Gardens!

Block C Sessions

1:30 – 2:30PM

C

Leading Successful Office Hours

Baxter Lecture Hall

This session is also run in Block A in Beckman Behavioral Biology B180
Please see the full description of this session on page 7.

Fun and Games: Creating Enjoyable and Memorable Learning Experiences in a Comfortable Setting.

Dabney Lounge

Dylan Freas, Graduate Student, Chemistry

We've all been in a classroom that was painfully boring at some point in our lives. However, as an instructor or a TA, you will have the unique opportunity to create an educational experience that is fun, personal, and memorable. In this session, we will discuss different ways that you can create a fun and enjoyable learning experience in a classroom setting. Specific topics will include how to establish a comfortable learning environment on the first day, how to employ games and other interactive teaching strategies throughout the quarter, and how your relationship with your students can impact their learning.

Effective Recitations: Helping Your Students Learn

Beckman Behavioral Biology, B180

This session is also run in Block B in Baxter Lecture Hall
Please see the full description of this session on page 8

Motivating Yourself and Your Students

Baxter Basement, B125

Annelise Thompson, Graduate Student, Chemistry

What actually motivates students beyond bribery and sweeping claims of future success? How can we motivate our students and help them feel like effective learners? We will take you through several strategies of how to motivate your students (and yourself) from day one in the classroom! Examples of motivational theory in practice will be drawn from both popular culture and experience as a teaching assistant at Caltech.

Block C Sessions

1:30 – 2:30PM

C

Building a Teaching Portfolio: The What, Why, and How

Baxter, 125

Olivia Wilkins, Graduate Student, Chemistry

A teaching portfolio showcases your teaching experiences and ability, and it is a valuable tool whether you are applying for a faculty position or reflecting on your teaching skills and philosophies. In this session, we'll go over the building materials for a teaching portfolio and what this document can do for you. We'll also discuss different approaches to preparing a teaching portfolio and how to tailor it to your needs and to your audience. Finally, we'll look at some of the opportunities and resources available at Caltech, from gaining teaching experience to putting the finishing touches on your teaching portfolio.

Life as a Lab TA

Baxter, 127

Kelsey Boyle, Graduate Student, Chemistry

Rebekah Silva, Graduate Student, Chemistry

This session will be an introduction to the various duties of being a lab TA, which can be one of the most fulfilling and intellectually engaging teaching opportunities. We will cover the major responsibilities of a lab TA, with emphasis on in-class duties and interactions with students. We will cover how to communicate effectively in lab, how to facilitate lab sessions, and how to handle tricky situations with your students, including examples of common, challenging situations and strategies on how to handle them.

Authoring Problem Sets and Exams

Baxter, 128

Voon Lai, Graduate Student, Geophysics

Allegra Liberman-Martin, Postdoctoral Scholar, Chemistry

This session will focus on methods of authoring homework and exam problems that use assessment as a teaching tool to maximize student learning. We will present step-by-step guidelines on designing effective problems and we will discuss practical issues associated with authoring problem sets, including scaffolding and logistics.

Block D Sessions

2:45 – 3:45PM

D

Caltech 101: What You Need to Know if You're Going to Teach Undergraduates

Baxter Lecture Hall

Valère Lambert, Graduate Student, Geophysics

Kavya Sreedhar, Undergraduate

Adrian Huang, Undergraduate

Alejandro Lopez, Undergraduate

In order to effectively teach students, it is crucial to understand your population and how they learn. In this session, we will present the “need to know” facts about undergraduate students at Caltech. We will profile the typical life of Caltech students based on student experiences shared by current undergraduates. Session facilitators will also share their thoughts on what they believe makes a successful mentor and effective TA. This session will be interactive - groups will be paired with undergraduates to learn about undergraduate life and brainstorm techniques to connect with students in the classroom.

Storytelling/Improvisation Techniques for Better Teaching

Dabney Lounge (NOTE: This session runs until 4:15PM)

Brian Brophy, Lecturer in Theater and Performing Arts at Caltech

Rebekah Silva, Graduate Student, Chemistry

Come learn and practice the foundations improvisation and storytelling with the goal of improving your teaching. Skills such as listening, being in the moment, and building off of students’ responses with “yes and” will help future teaching assistants learn how to work with students and each other in creative and productive ways. This workshop will start with several warmup games, after which we will identify participants’ potential teaching concerns and issues and play them back in a collaborative and safe environment.

Fair Grading and Effective Feedback

Beckman Behavioral Biology, B180

This session is also run in Block A in Baxter Lecture Hall

Please see the full description of this session on page 6

Block D Sessions

2:45 – 3:45PM

D

The ABCs of Course and Lesson Design

Baxter Basement, B125

Jenn Weaver, Assistant Director, Center for Teaching, Learning, and Outreach

Are you interested in one day becoming a course instructor or designing a guest lecture? This session explores the fundamentals of designing a course or lesson (the pedagogical strategies and methods for both are essentially the same!). I'll walk you through the process of Backwards Design, how to write learning outcomes, assessing your students through engagement and designing active learning activities. We'll also discuss the tricky situations of weighing breadth versus depth, what to do when you don't cover everything you wanted to and pacing your lesson or course.

Teaching Outside the Classroom: Considerations for Effective Mentoring

Baxter, 125

Olivia Wilkins, Graduate Student, Chemistry

The strategies and techniques used for great teaching are very similar (and often the same!) as those used for mentoring. Whether your mentees seem to learn faster than you can teach them or aren't quite up to the speed you'd like, it is important to help them stay motivated and engaged. In this session, we will discuss what makes for effective mentoring, from working with SURF students to advising graduate students and beyond, whether for 10 weeks, 10 months, or a lifetime. This session will give you ideas for how to interact with your mentees (regardless of where they are in their own careers) in contexts such as teaching research skills, helping students resolve conflict, and how to continue (or end) your mentoring relationship after your "official" role as mentor has come to a close. Throughout this session, I will also highlight how mentoring mirrors teaching in the classroom and how you can adapt your teaching skills to working with your mentees.

Introduction to Chemistry TA-ing

Baxter, 127

Sara Weaver, Graduate Student, Chemistry

Jeremy Tran, Graduate Student, Chemistry

Dylan Freas, Graduate Student, Chemistry

Join us if you are a TA for a chemistry class this year. We will introduce the Chemistry TA SharePoint site as well as hold a panel discussion on preparing for and being a recitation, grader, or lab TA. Our panel consists of experienced and passionate TAs, and we are eager to hear your questions and share our experiences.

Notes

Notes

Thank You

To the Teaching Conference Committee and Lead Facilitators for organizing the program and sessions!

- Tina Boville, Postdoctoral Scholar, Chemical Engineering
- Kelsey Boyle, Graduate Student, Chemistry
- Joshua Brake, Graduate Student, Electrical Engineering
- Brian Brophy, Lecturer in Theater and Performing Arts at Caltech
- Eric Burkholder, Graduate Student, Chemical Engineering
- Scott Dawson, Postdoctoral Scholar, Aerospace
- Erin-Kate Escobar, Assistant Director, Caltech Center for Diversity
- Dylan Freas, Graduate Student, Chemistry
- Susanne Hall, Campus Writing Coordinator in the Hixon Writing Center and Lecturer in Writing
- Cassandra Horii, Director, CTLO
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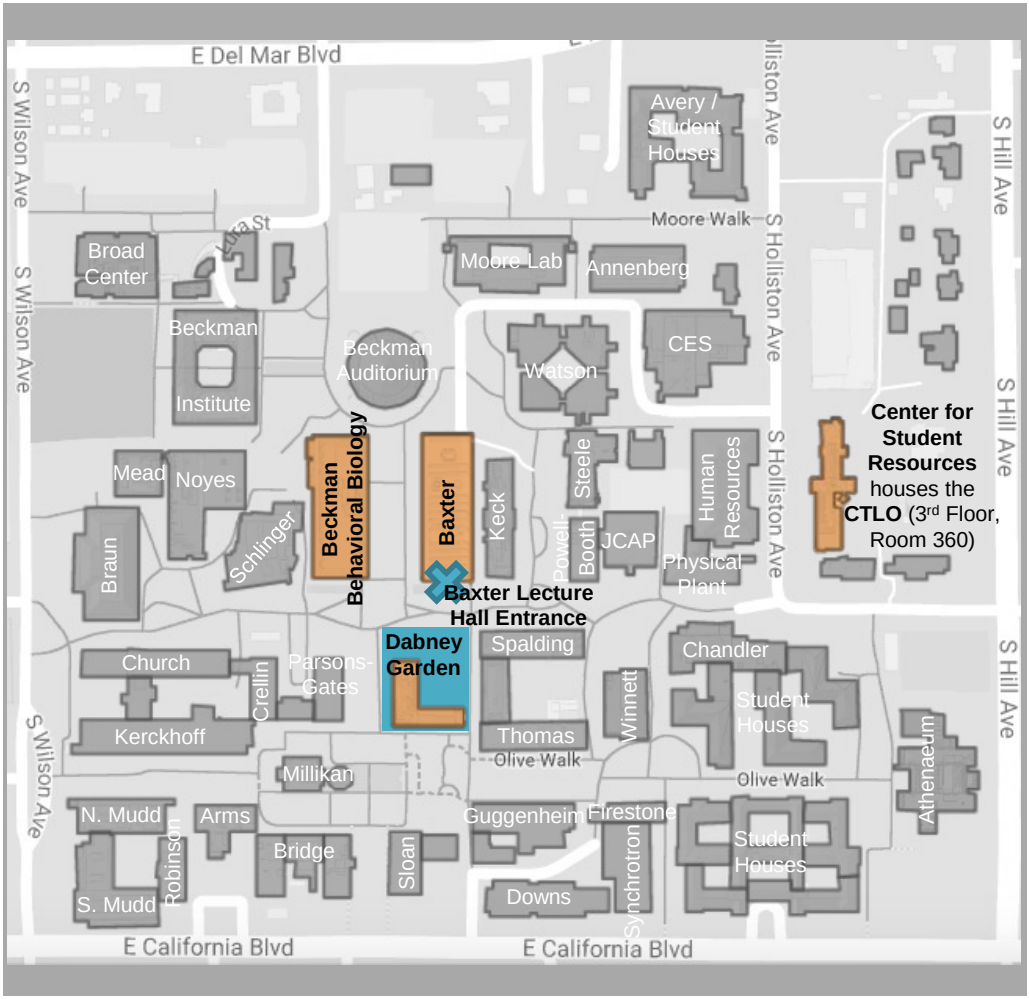
- Stephanie Kong, Graduate Student, Chemical Engineering
- Voon Lai, Graduate Student, Geophysics
- Valère Lambert, Graduate Student, Geophysics
- Red Lhota, Graduate Student, Chemical Engineering
- Allegra Liberman-Martin, Postdoctoral Scholar, Chemistry
- Alejandro Lopez, Undergraduate
- Ellie Race-Moore, Office Assistant, CTLO
- Leslie Rico, Administrative Coordinator, CTLO
- Denise Schmitz, Graduate Student, Astronomy
- Rebekah Silva, Graduate Student, Chemistry
- Kavya Sreedhar, Undergraduate,
- Annelise Thompson, Graduate Student, Chemistry
- Jeremy Tran, Graduate Student, Chemistry
- Min-Feng Tu, Graduate Student, Physics
- Sara Weaver, Graduate Student, Chemistry
- Jenn Weaver, Assistant Director, CTLO
- Olivia Wilkins, Graduate Student, Chemistry
- Mike Wong, Graduate Student, Planetary Science
- Donna Wrublewski, Chemistry Librarian and Information Specialist at Caltech
- Teaching conference image modified from original image created by Artmonkey – Freepik.com.

Special thanks to the Graduate Dean's Office for their support of the Caltech Teaching Conference

Teaching Conference Map

California Institute of Technology



Restrooms:

Dabney:	Binary Single Stalls (Women and Men): Lounge Southeast Corner, Basement, 1st Floor
Baxter:	All Gender Single Stall, 1st Floor; Binary Single Stall (Women), Basement
Baxter Lecture Hall:	Binary Multi-stall (Men and Women)
BBB**:**	Binary Single Stalls (Women and Men), 3rd Floor

Elevators:

Baxter Central hallway:	Enter from Beckman Mall; exit 2nd Floor for Baxter Lecture Hall
BBB Central hallway:	Enter from Beckman Mall; exit basement for B180 and B101