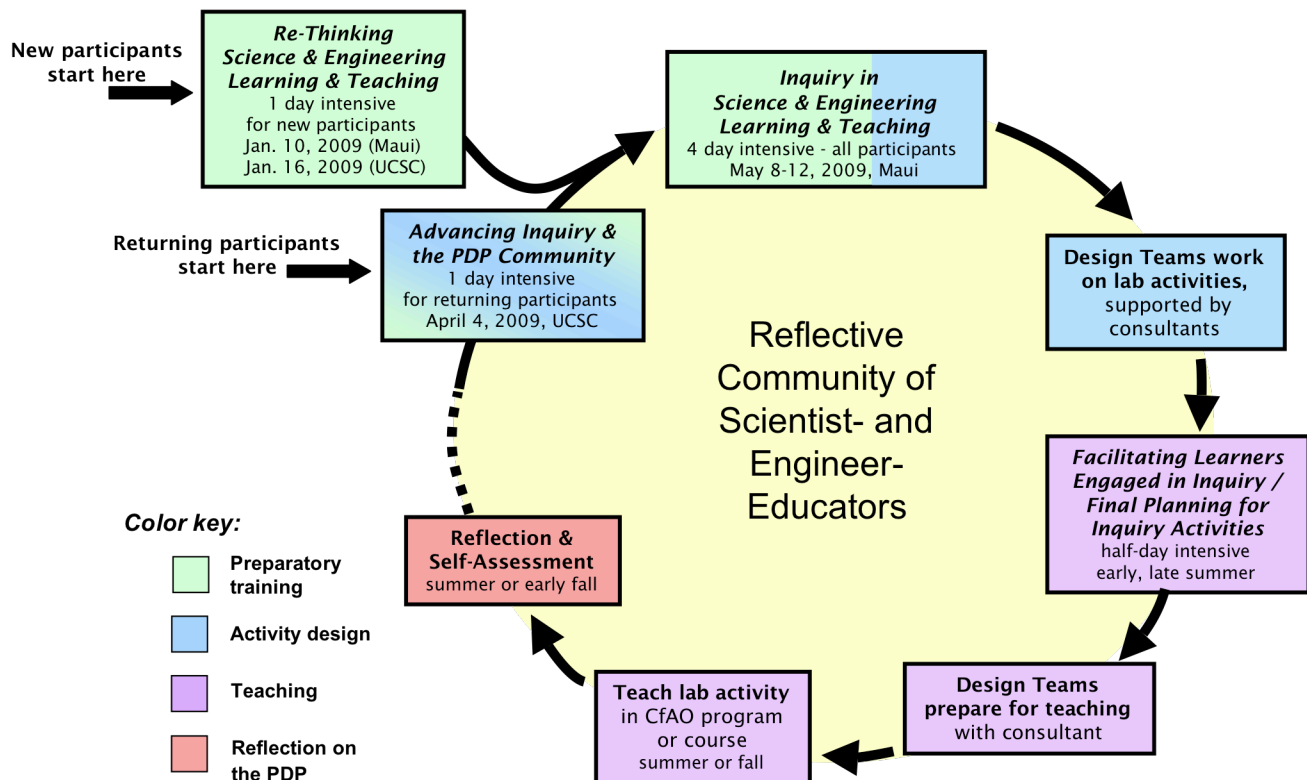


# 2009 Professional Development Program

## Institute for Scientist & Engineer Educators (ISEE) Center for Adaptive Optics (CfAO)

The Professional Development Program (PDP) is a flexible, multi-year program for scientists and engineers at the early stages of their careers, with a primary focus on graduate students. All participants in the PDP attend 4 days of teaching workshops held in May 2009. Prior to the 4 days, first time participants attend 1 day of workshops in January 2009, and returning participants attend 1 day of workshops in April 2009. All participants work on a design team during and after the May workshops, continue developing skills through mini-workshops and expert consultation, and put their new teaching skills into practice. The practical teaching experience takes place in one of CfAO's or ISEE's educational programs or courses, acting as a "teaching lab" for PDP participants. PDP participants leave the program as highly trained, innovative, and reflective scientist-educators and engineer-educators.

### The PDP Experience



**Scholarships and travel awards available!**

**For information about the PDP contact:  
Lisa Hunter (831) 459-2416, hunter@ucolick.org**

# 2009 Professional Development Program

The 2009 PDP will include:

1. Re-Thinking Science & Engineering Learning & Teaching (1 day)
2. Advancing Inquiry, Advancing the PDP Community (1 day)
3. Inquiry in Science & Engineering Learning & Teaching (4 days)
4. Facilitating Learners Engaged in Inquiry/Final Planning for Inquiry Activities (1/2 day)

## Re-Thinking Science & Engineering Learning & Teaching (Re-SELT)

### - NEW PARTICIPANTS

This day serves as an introduction to the PDP. It is simultaneously an opportunity to learn more about the overall PDP, and an initial experience that will be built upon for those who are accepted into the full PDP program. Re-SELT is required for all 1<sup>st</sup> time participants in the PDP, and will be offered twice in different locations:

January 10, Maui, HI

January 16, 2009, Santa Cruz, CA

Returning PDP participants: Re-SELT is not required, but you may attend as a refresher before the rest of the PDP.

**REGISTRATION & APPLICATION FOR FEE WAIVER** for Re-SELT available at:

<http://cfao.ucolick.org/EO/PDP/>

## Advancing Inquiry and the PDP Community

### - RETURNING PARTICIPANTS

This 1 day set of workshops is for returning participants, and prepares them for leading design teams. Participants will gain additional skills and experience in designing inquiry activities and leading a design team.

**Required of all returning participants.**

April 4, 2009, UC Santa Cruz

With optional Design Symposium April 3, 2009

## Inquiry in Science & Engineering Teaching & Learning (I-SELT)

### - ALL PARTICIPANTS

I-SLT is a 4-day intensive that is a core experience, and brings together the PDP teaching community. There are two strands of workshops that run concurrently at times, and at other times merge into one community.

**I-SELT Workshop dates:**

**May 8-12 2009, Maui, Hawaii**

**APPLICATIONS:** <http://cfao.ucolick.org/EO/PDP/>

**DEADLINE FOR APPLICATIONS AND TRAVEL AWARD REQUESTS:**

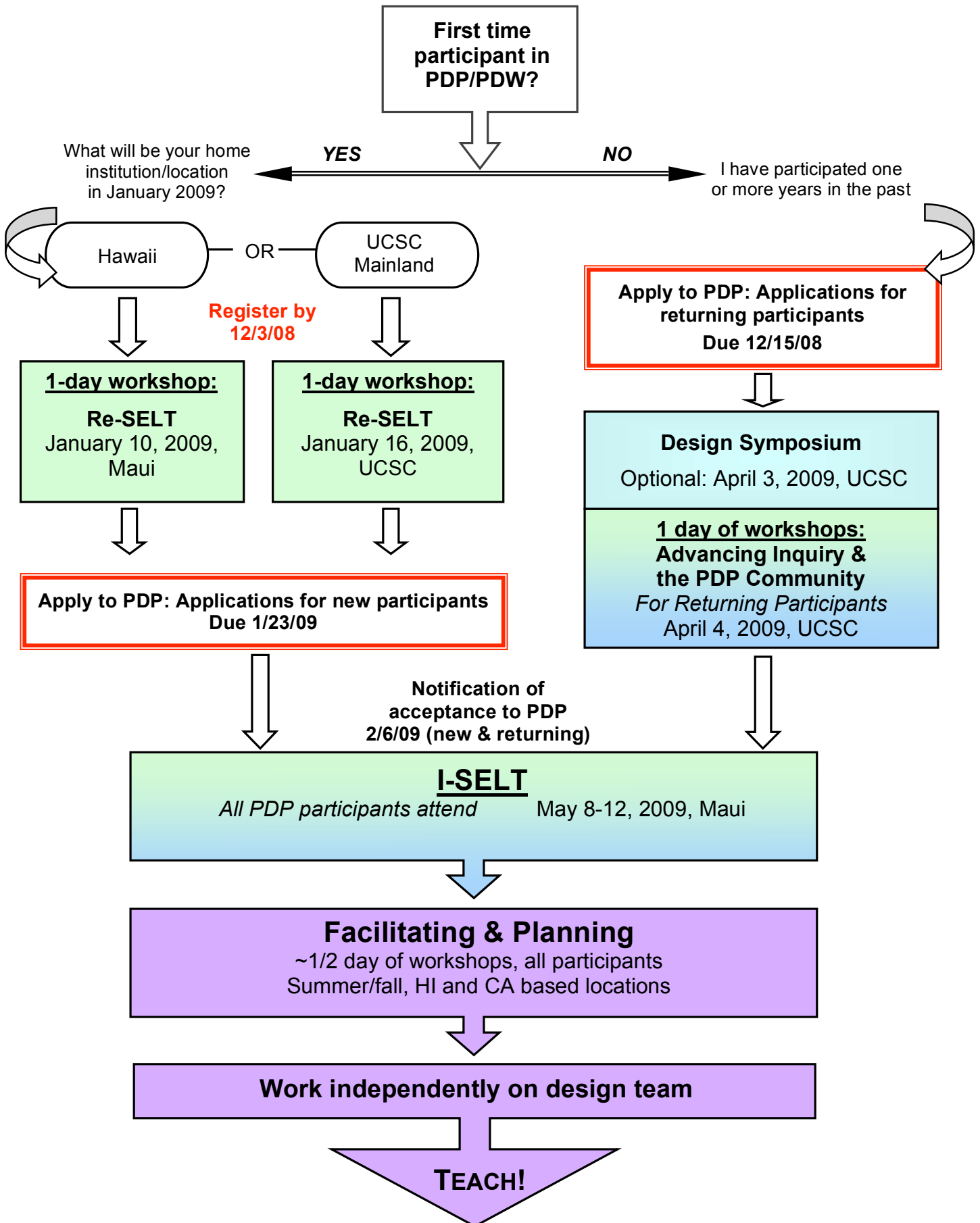
**First time participants: January 26, 2009**

**Returning participants: December 15, 2008**

## Facilitating Learners Engaged in Inquiry Learning / Final Planning for Inquiry Activities – ALL PARTICIPANTS

These workshops take place together in the course of one half-day. They will be offered in Summer 2009 and prepare PDP participants for their coming teaching experience. Dates & locations TBA.

# 2009 PDP Pathways



## Frequently Asked Questions

### Who can participate?

- UCSC graduate students in science or engineering fields who can make a commitment to teaching in a CfAO/ISEE projects
- Institute for Astronomy and UH engineering and physics graduate students
- Participants in the Akamai Workforce Initiative (AWI)
- Educators involved in CfAO-affiliated education projects

### What is the cost to participate in the PDP?

PDP workshops all have a registration fee, which is often waived in exchange for teaching service. The registration fees are as follows:

Re-Thinking Science & Engineering Learning and Teaching	\$150
Advancing Inquiry and the PDP Community	\$225
Inquiry Science & Engineering Learning & Teaching	\$1500
Facilitating Learners Engaged in Inquiry / Final Planning	\$100

For many people there is no cost for the PDP, but there is a “service” requirement that all participants teach in a CfAO, or affiliated, project. Teaching commitments range from 1-day activities to full courses, depending upon your interests and availability. The program does not provide any salary for teaching time, although in some cases other sources cover this cost. Small grants are available for participation in the PDP, including workshop fees and the cost of airfare, local transportation, hotel and meals. However, applicants are strongly encouraged to find funding, or partial funding, from other sources. Everything you need to apply to the program, fee waivers, and travel awards is included on the PDP application.

### What will I gain from participating in the program for a 2nd or 3rd time?

Participants are encouraged to attend for a second, third or even fourth year, with an increasing role in program leadership. Partially concurrent workshops are offered to returning participants. To facilitate the varied levels and interests of returning participants, we have developed a number of roles. Depending upon your role placement, you may gain experience in facilitating inquiries, shadowing a facilitator, leading a discussion, assessment, or other new roles defined each year. Returning students are strongly encouraged to become Design Team Leaders, leading a small group of participants in the design or refinement of an inquiry activity.

### Why is much of the PDP held in Hawaii?

The CfAO is involved in a range of research and technology projects that include astronomy, physics, mathematics, engineering, and vision science. Our astronomical advances, and the technology development that supports the science, rely heavily on the resources of the state of Hawaii. The CfAO is committed to increasing access for Hawaiians to the technical workforce related to telescopes, and to the development of high quality educational experiences for local students. The Akamai Workforce Initiative (AWI) is a Hawaii based program that is built upon past CfAO work, and in 2009 includes Hawaii participation in the PDP.

### Can my “teaching experience” be in a non-CfAO/ISEE project?

Teaching in a CfAO project offers many advantages, so participants are strongly encouraged to take advantage of the supportive, accessible teaching venues offered through CfAO/ISEE. However, if you have an alternate place to teach, please contact us. We are open to ideas and interested in learning about your teaching opportunities.

**PDP website: <http://cfao.ucolick.org/EO/PDP/>**

**For information about the PDP: Lisa Hunter, [hunter@ucolick.org](mailto:hunter@ucolick.org), (831) 459-2416**