

PROGRAM DESCRIPTION

Post Doctoral Programs at the University of California Santa Cruz

DESCRIPTION

The UC Santa Cruz Center for Informal Learning and Schools reflects the university's strong tradition of interdisciplinary collaborations among the natural and social sciences. The programs support research and advanced study of learning as a sociocultural process, involving individual, social and cultural/community contributions. The programs build a synergy between formal and informal learning through using informal learning settings as learning laboratories to study learning and study about the teaching of science and mathematics. Research collaborations make use of well-established links between UC Santa Cruz and a number of informal science institutions in the San Francisco and Monterey Bay areas.

There are four different CILS programs at UC Santa Cruz:

- MA Program in Informal Science Education
- PhD Program in Education or Psychology, with a research emphasis in informal learning
- Internships in informal learning for PhD students in the social or natural sciences at UCSC
- Post Doctoral Program

POST DOCTORAL PROGRAMS IN EDUCATION OR PSYCHOLOGY

There are two different postdoctoral traineeships.

- 1) A **postdoctoral internship program** to train experienced scientists who wish to become more grounded in learning theory and practice. It is for PhDs with formal training in the social or natural sciences but with little study of pedagogy, informal learning and recent advances in science learning and the learning sciences. A primary focus will be involvement

with informal learning institutions working on projects related to the Center for Informal Learning and Schools.

- 2) A **postdoctoral research program** for experienced researchers in the learning sciences who wish to pursue research in CILS-related domains. Research post doctoral fellows will link with a UC Santa Cruz faculty member who will guide them in defining their program of research, helping them initiate some new studies, and providing specialized research and further methodological training.

The program are tailored to the specific interests and needs of the individual student. Post doctoral fellows will attend seminars on learning theory and research methodologies appropriate to different contexts. They will work with university faculty, graduate students, and museum professionals, both on campus and in museums. They will attend the Bay Area Institute and present current and former research and learning projects as part of the modeling process for masters and doctoral students.

All post doctoral trainees will be involved with the CILS PhD program through participation in departmental research groups. These groups integrate the post doctoral fellows in the research and instructional fabric of the programs. Post doctoral fellows attend weekly informal learning research seminars in which research post doctoral fellows, faculty, invited guest speakers and advanced graduate students present their proposed and current research for discussion.

The internship and research postdoctoral programs are designed to make available a variety of opportunities for post doctoral fellows to provide their content expertise to informal science institutions and gain a greater understanding of learning in these environments. These opportunities could include a variety of informal science programs such as exhibit development, exhibition design and narrative, curriculum development, teacher training programs, interpretive programs for students or the public, as well as other facets of teaching and learning in informal settings.

FACULTY/RESEARCH INVOLVED

Julia Aguirre has a research focus on relationships of language, bilingualism, and mathematics understanding. She has specific interest in mathematical meaning making among English as second language students. *(I made this description up, needs to be developed)*

Doris Ash uses a Vygotskian theoretical framework to explore aspects of English and Spanish speaking families scientific sense making conversations in informal learning settings. Her emphasis is thematic content and negotiation patterns of conversations that center on biological content such as adaptation.

Margaret Gibson is interested in relationships of ethnicity, class gender and learning. She is involved in studies on community-school relationships including immigrants and education.

Judit Moschkovich has a research focus on relationships of mathematics learning and understanding in academic and non academic/everyday environments. She is interested in student conceptions of linear functions She has been conducting research on with a particular interest in bilingual Spanish and English speaking Latino students discourse in mathematics and science.

Lucinda Pease-Alvarez investigates language and literacy development. Her current research focuses on ways teaching and learning are organized among Mexican descent children living in California which includes home-school relationships and patterns of social organization that characterize children's engagement

Patricia Stoddart is interested in studying relationships of diversity, language and science learning with teachers and students. Her research work looks at science learning in classroom and non classroom settings. She also has a long term interest in educational reform.

Gordon Wells has a long term interest in language and literacy development and analysis of discourse in teaching and learning.. His current interests in learning research include dialogic inquiry, sociocultural theory and education, and collaborative action research methods.

Margarita Azmitia

Catherine Cooper

Maureen Callanan is Head of Developmental Psychology Program. Callanan's research focuses is on children's cognitive development in the context of social interactions, especially with family members. One main focus involves young children's informal science learning in the context of everyday conversations with parents. She is examining children's 'why' questions and resulting conversations about science topics as a database for children's developing intuitive theories

about scientific domains. In her collaboration with the Children's Discovery Museum of San Jose, Callanan has spent a great deal of time exploring the ways that scientific content and scientific process are discussed in family conversations.

Barbara Rogoff investigates how children's development occurs as they participate in shared cultural activities with other people (especially parents, teachers, and peers). She is interested in cultural variation in the organization of people's participation in shared problem solving in cultural institutions such as schools, museums, and families. In examining informal settings of children's learning in a variety of cultural communities, she is particularly interested in processes of collaboration, observation, the development interest and attention, and varying roles of adults as guides or as instructors.

Casey Moore

Marc Mangel

Bakthan Singaram

WHO SHOULD APPLY

Successful applicants will be individuals who have a Ph.D. either in science, education, or the social sciences. Research experience in informal science education or educational technology is a plus.

COMPENSATION

CILS post doctoral students will receive \$35,000, and full benefits, for up to two years of work.

APPLICATION PROCESS

To request an application, please write to: Center for Informal Learning and Schools, Exploratorium, 3601 Lyon Street, San Francisco, CA 94123. Or contact us by email at cils@exploratorium.edu. Applications can also be downloaded from the cils website at www.exploratorium.edu/cils