

Segrè Internships for Summer 2011

Physics 111 Laboratory

Students are invited to apply for the Segrè Internship, to be awarded to undergraduate or graduate students who have taught in, completed or are completing the 111-Advanced Laboratory course. Interns will use research techniques as they collaborate with faculty and staff to improve experiments and develop new ones. Responsibilities include:

-researching the underlying physics of the experiments -participating in building apparatus -programming computers to acquire data and control experiments, -testing and trouble-shooting experiments
Interns also provide valuable input by contributing to the write-ups for the experiments.

Possible projects for this summer include modifying, testing, and developing of new experiments like;

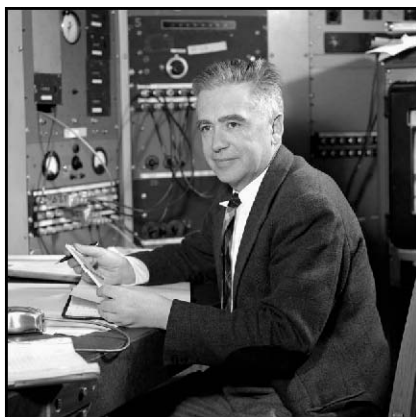
- Bells Inequalities and Entanglement, quantum eraser,
- Modifying and testing a new Compton Scattering apparatus,
- Programming and testing of a Digitizer card to function as a PHA for GMA and RUT,
- Adding fluorescence to the Optical Trapping experiment,
- Programming of a FPGA for use as a counter in Bells Inequalities experiment,
- LabView programming, and modify of write-ups on the 111-lab wiki site,
- Testing of new BSC computers for the Fall semester.

The internship is for eight weeks in June and July with a stipend of at least \$ 4,000.

Internships will begin on Monday, June 6, 2011 or TBA.

Two or more selected interns will be notified by May 3, 2011

See 111-Laboratory Sr. Staff Engineer Don Orlando for more details.



In Memory of Emilio Segrè

This award is given in memory of Emilio Segrè (1905-1989). Born in 1905, Segrè was the first student to earn his doctoral degree under the sponsorship of Italian physicist Enrico Fermi, his friend and collaborator for more than three decades. Upon immigrating to this country in 1938 (he later became an U.S. citizen), Segrè accepted a position at the University of California, Berkeley. There, he commenced one of his most productive periods in nuclear physics, working with Glenn Seaborg, a chemistry professor, on methods of separating nuclear isomers. In the period following World War II, the anti-proton, an atomic particle that sought to prove nature's symmetry still eluded scientists. In 1955, using Berkeley's powerful new cyclotron, Owen Chamberlain and Emilio Segrè made the first observation of the anti-proton. This discovery signaled a major leap in the study of matter and antimatter. Emilio G. Segrè received the Nobel Prize in 1959 for his work with Anti-Protons.

The Segrè Internship APPLICATION

Please Print

Last Name _____ First Name _____ Initial _____

Home Address: _____

E-mail address: _____ Campus Phone: _____

Home Phone: (_____) _____ Cell Phone (_____) _____

Birthdate: _____ SID# _____

CalNet Login Name: _____

Student Status: Undergraduate ____ Graduate ____ Major _____

111 Lab Experience: Completed ____ Currently Enrolled _____

Do you currently hold a fellowship? No ____ Yes ____ Title: _____

**You should include your work experience like;
Working with hand and power tools, mechanical assembly work, experience with
optics alignment, PC computer knowledge, LabView programming, any other
programming knowledge, and a wiliness to learn new things.**

Please attach or send your resume and all work experience with this application.

Applications should be submitted by April 18th;

Send applications to:

Don Orlando
Department of Physics
366 LeConte #7300 Berkeley, CA
94720-7300

(510) 642-5328
E-mail: phylabs@berkeley.edu